ADOLESCENT-PARENT ATTACHMENT, EMOTION REGULATION AND INTERPERSONAL COMPETENCE IN ADOLESCENCE.

A STUDY OF A PSYCHIATRIC AND A NON-CLINICAL POPULATION.

by

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THESIS SUBMITTED TO THE UNIVERSITY OF EDINBURGH
FOR THE DEGREE OF DOCTORATE IN CLINICAL PSYCHOLOGY
AUGUST 2004

DECLARATION

'This thesis has been composed by myself and the work contained herein is my own'.

ACKNOWLEDGEMENTS

I am very grateful to my clinical supervisor, Cathy Richards, and my academic supervisor, Alison Harper, who both helped with the planning and write up of this thesis. Thanks also to Arthur Still for his statistical advice and encouragement and to Dr Nicola Cogan for her comments on the final draft.

A big thank you to all the young people who participated in the study by completing lengthy questionnaires. Thanks also to the teachers who were so willing to help me to recruit participants from their schools (especially Dr Campbell from Tynecastle High School, Robert Burnett from St Thomas of Aquin's High School and Dorothy Greig from James Gillespie's High School).

I am grateful to The City of Edinburgh Council for giving me permission to undertake this research in schools. Thanks also to my colleagues, especially Alley Mercieca, at the Young People's Unit who helped me to recruit participants from the out patient and day patient departments.

Finally, I would like to thank my friends, especially Kate, Kit, Elisa, Alistram, Mike, Norma and Sayaka, and my family for their support over the doctoral course.

CONTENTS

ABSTRACT

This cross-sectional, comparative study aimed to investigate whether styles of coping help to explain the association between parent-adolescent relationships and adolescents' social functioning with peers.

A non-clinical sample (N=181), consisting of young people aged 11 to 18 years old, was recruited from secondary schools in Edinburgh. A comparative clinical sample (N=19), consisting of young people aged 14 to 18, was recruited from the Young People's Unit, Royal Edinburgh Hospital. All participants completed questionnaires on attachment to mother, father and friends, behavioural coping styles, interpersonal competence, depression and anxiety. Demographic questions regarding age, gender and parental marital status were also completed by participants.

There was no difference between the clinical and non-clinical groups in terms of attachment to mother but the clinical group rated their attachment to fathers more negatively than the non-clinical group. The clinical group reported to use solve the problem style of coping less, and non-productive coping more, than the non-clinical group. There was no difference between the two groups in reported use of reference to others style of coping. The clinical group rated themselves lower on interpersonal competence than the non-clinical group. As expected, the clinical group scored higher on both depression and the anxiety.

Detailed analysis of the non-clinical sample revealed that there was an association between attachment to parents and interpersonal competence. Attachment to parents was also related to solve the problem style of coping and solve the problem style of coping was associated with interpersonal competence. Solve the problem style of coping was tested as a possible mediating factor between attachment to parents and interpersonal competence. A partial correlation controlling for solve the problem style of coping reduced the association between attachment to parents and interpersonal competence to a weaker, though still significant, correlation. Multiple regression analyses suggested that attachment to parents did not help to explain the variance in interpersonal competence over and above solve the problem style of coping. The goodness of fit of the hypothesized mediation model was tested using AMOS program for structural equation modeling. Overall, the model fitted the data set well. Implications and limitations of the study and directions for future research are discussed.

1 Introduction

1.1 Overall aim of this study

This study aims to investigate whether emotion regulation styles (specifically behavioural coping styles) help to explain the concurrent associations between parent-adolescent relationships (in terms of trust, communication and alienation) and young people's interpersonal competence in the peer context.

1.2 The importance of peer relationships

Many researchers have found that interpersonal competence is an indicator of mental health, and that peer relationships in childhood are both predictive of and related concurrently to well being (e.g. Buhrmester, 1990; Coie, Dodge & Kupersmidt, 1990; Hartup, 1983; Parker & Asher, 1987; Parker, Rubin, Price & Desrosier, 1995). These findings have sparked interest in the origins of individual differences in children's peer relations, with a focus on the influence of emotional security in families. In particular, security of attachment to primary caregivers has been highlighted as having important implications for later close relationships (Elicker, Egeland & Sroufe, 1992; Kerns, Klepac & Cole, 1996).

1.3 Attachment, peer relationships and mediating factors

Contreras and colleagues (Contreras, Kerns, Weimer, Gentzler & Tomich, 2000) point out that, although the connection between parent-child attachment and the quality of peer relationships is now well established (e.g. Collins & Read, 1990; Kerns *et al.*, 1996), there has been little research investigating the processes that account for this link.

Attachment theory (Bowlby, 1973) proposes two mechanisms that help to explain the associations between attachment and peer relationships. Firstly, internal working models (Main, Kaplan & Cassidy, 1985) and schemas (Baldwin, 1992; Bretherton, 1987) that guide the processing of information in social interactions. Secondly, emotion regulation styles, which are characteristic strategies and behaviours used to control emotional arousal (Contreras *et al.*, 2000).

1.4 Plan for the introduction

The introduction is structured in the following way. Firstly, I will provide an overview of attachment theory, which is the central theory upon which this thesis is based. Then I will define the term emotion regulation and detail Lazarus and Folkman's (1984) model of coping, as behavioural coping styles will be used as an indicator of emotion regulation ability in this study.

Subsequently, I will present the theory and evidence regarding the main extrinsic (e.g. parental responsiveness) and intrinsic factors (e.g. temperament) in the development of emotion regulation and highlight the possible interaction between these factors. Then I will discuss the theory and evidence regarding the link between experiences in the caregiving relationship and social functioning in childhood and adolescence. I will briefly highlight the theory and research evidence for the intergenerational correlations of attachment status. I will then discuss social learning theory, as an alternative or complimentary model to attachment theory.

Following this, I will proceed to discuss the theory and evidence regarding the link between emotion regulation and social functioning. Evidence regarding the link between experiences in the caregiving relationship, the development of emotion regulation and interpersonal competence will then be discussed, as will the likely bi-directional influence of emotion regulation strategies and peer relationships and the potential for revisions to internal working models and attachment strategies.

I will discuss the above areas as far as possible drawing from the adolescent literature but I will devote a section specifically about adolescence relating to the above constructs and why I think it is particularly relevant to study this developmental stage.

After this, I will present a rationale for investigating a clinical in addition to a non-clinical population and for examining the experience of both maternal and paternal caregivers. Following on from this, I will briefly present the current literature on gender in relation to attachment, emotion regulation and interpersonal competence. Finally, I will discuss some methodological issues, the goals of the study, the possible implications of this research and my hypotheses.

1.5 Search strategy for exploration of the literature base

Prior to developing the research proposal, the literature and evidence base on attachment theory in relation to socio-emotional development and psychopathology in adolescence was searched. Attachment theory has influenced extremely productive research streams in developmental research over the past 40 years that span various disciplines and areas of empirical research, such as social care, education, child development and adult interpersonal development. In order to develop a constructive focus within this project I limited my review to a subsection of the extremely rich attachment literature that concerns mental health and emotional and interpersonal development in adolescents.

Electronic searches were carried out in several databases including MEDLINE (1966-2003), EMBASE (1980-2003) and PsychINFO (1872-2003). The titles in these databases were searched using the following key words: attachment, parenting experiences or parent attachment along with the search terms: emotion regulation, coping styles or coping skills and peer relationships, social functioning or social development. Further searches were carried out using the terms attachment and psychopathology as key words. Papers were then selected if they were from peer-reviewed journals. Further in depth manual searches were carried out as a result of key references incorporated in the main relevant literature.

1.6 Overview of attachment theory

Attachment theory developed out of the combined work of John Bowlby and Mary Ainsworth (e.g. Ainsworth & Bowlby, 1991). Drawing on concepts from ethology, information processing, developmental psychology and psychoanalysis, Bowlby formulated the basic doctrine of the theory (1969, 1973). In so doing, he developed our understanding of a child's relationship to the mother and its disruption through separation, deprivation and bereavement.

Ainsworth's pioneering methodology made it possible both to test some of Bowlby's ideas empirically and to expand the theory. Specifically, she developed the concept of the attachment figure as a secure base from which an infant can explore the world.

Bowlby (1969, 1973) detailed a coherent model of the process by which the bond between mother and infant develops and the functions that this connection serve. He argued that, because of the prolonged dependence of an infant on its mother,

behavioural mechanisms evolved to protect the immature offspring and to increase its chances of survival to reproductive age.

Essentially, mother and infant are thought to have evolved a coordinated relationship in which the infant's signals of distress or fear are noted by the mother, who in turn offers comfort and protection, as well as a secure base from which the infant can explore the environment. According to Bowlby (1969), these early caregiving experiences are internalised by the child as working models that not only serve as a prototype for future relationships with significant others but also provide unwritten rules for how one experiences, expresses and copes with distressing emotions (Cooper, Shaver & Collins, 1998).

1.7 Strange Situation experiment and classification of attachment styles

Ainsworth and her colleagues (Ainsworth, 1973; Ainsworth, Blehar, Waters & Wall, 1978) developed a system for identifying and describing individual differences in attachment among mother-infant pairs. They found that infants differed in the way they handled the stress of being left alone by their mother in a strange situation – a laboratory room equipped with novel toys. Initially they described three categories of "attachment style" to explain the observed behaviours of the children. According to the classificatory system, the majority of infants, called securely attached, became quiet or troubled in their mother's absence but quickly settled thereafter and expressed warm, relieved greetings and were quickly soothed by their mother when she returned.

Most other young children coped in two strikingly different ways, both of which Ainsworth and her colleagues called insecurely attached. Some children – labelled anxious-ambivalent – became extremely distressed by the separation. Instead of obtaining comfort, however, they continued to protest angrily after the mother's return, even when held by her. They behaved ambivalently, alternately seeking and rejecting the mother's attempts to soothe them. The third group, called avoidant, seemed remarkably undistressed by their mother's departure, often hardly noticing the separation. The infants in this group seemed disinterested, when the mother returned. They did not seek physical cuddling or comforting and appeared to be prematurely self-reliant (Ainsworth *et al.*, 1978). Sroufe and Waters (1977) found that, despite the outward appearance of calm in this group, these children tended to experience extremely high levels of physiological arousal during the reunion episodes. For this

reason in part, the avoidance they display is believed to be defensive and to reflect attempts to suppress their own need for comfort (Cassidy & Kobak, 1988; Main & Weston, 1982).

A fourth style of attachment – disorganised – was later proposed by Main and Solomon (1986), to categorise a group of children whose behaviour had been previously unclassifiable. This type is characterised by disorganised or disoriented attachment behaviour. Such children demonstrate conflict behaviours, fear of the caregiver, confusion or other unusual behaviour (Main & Solomon, 1990). Main and Hess (1990) speculated that disorganised attachment results from extremely unpredictable caregiver interactive behaviour. They reason that unpredictability leads the infant to be afraid for or afraid of the caregiver.

The assessment of attachment organization in the strange situation (Ainsworth *et al.*, 1978) has been conceptualised as assessment of emotion regulation (Sroufe, Schork, Motti, Lawroski & LaFreniere, 1984). Securely attached children will seek out the parent when upset or scared, thereby using the parent as a safe haven. When securely attached children's fears and concerns are successfully attended to, they will use the parent as a secure base from which to explore the environment.

1.8 Attachment styles, internal working models, emotion regulation and social functioning

Enabled partly through Ainsworth's development of categories of attachment styles and longitudinal studies examining later social functioning, attachment theory was extended to predict that the style of the attachment relationship influences how children develop views of themselves and the world and how they are able to regulate their emotions, particularly in conditions of distress (Bowlby, 1969/1982). Bowlby named the cognitive aspect "working models" of self and other. Such cognitive, emotional and behavioural features were thought to guide future interactions in the social environment.

In terms of the development of emotion regulation, the primary caregiving relationship has been proposed to foster the identification and moderation of emotion states – which is eventually internalised by the child. Before discussing the theory and evidence for this process, I will define what, according to recent literature, is meant by the term "emotion regulation", a term which is central to this thesis.

1.9 Definition of emotion regulation

Thompson (1994) proposed that:

"Emotion regulation includes both extrinsic and intrinsic processes responsible for monitoring, evaluating and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (pg.27).

Similarly, Eisenberg *et al.* (Eisenberg, Fabes, Shepard, Murphy *et al.*, 1997) defined emotion regulation as:

"The ability to inhibit, enhance, maintain and modulate emotional arousal to accomplish one's goals" (pg.642).

1.10 The behavioural outcome of emotion regulation

Coping styles are a crucial component of emotion regulation. Within the emotion regulation literature, these strategies have been conceptualised as the behavioural outcome of the emotion regulation process. Hence, empirical studies of individual differences have used coping as an index of the adequacy of the emotion regulation process (Contreras *et al.*, 2000). As will be discussed in the methods section, for the purposes of this study, behavioural coping strategies will be used as an indicator of emotion regulation ability.

1.11 A model of coping

Lazarus and Folkman's (1984) Ways of Coping paradigm provides a framework for understanding the development of the planned and more complex forms of emotion regulation. They distinguish between problem-focused coping – a person's attempts to change the situation itself, typically by engaging in problem-solving strategies – and emotion-focused coping – a person's engagement in activities (physical or cognitive) that are aimed at lessening emotional distress (e.g. avoidance, selective attention and cognitive restructuring). At times, emotion-focused coping leads to cognitive reappraisals of the situation, changing the person's construction of the event without actually altering the situation.

1.12 Development of emotion regulation

It has been well demonstrated in the literature that relational (especially parental) and contextual factors are important in the development of emotion understanding and emotion regulation (e.g. Calkins, 1994; Cassidy, 1994; LaFreniere & Sroufe, 1985; Laible & Thompson, 1998; Suess, Grossmann & Sroufe, 1992; Sroufe & Waters,

1977; Cooper *et al.*, 1998; Steele, Steele, Croft & Fonagy, 1999). In addition to these external influences, intrinsic factors such as temperament are thought to play a role. The following sections will highlight both extrinsic and intrinsic factors in the development of emotion regulation and how these factors might interact.

1.13 Relational influences

Referring again to attachment theory, a central principle is that parental responsiveness and sensitivity to the child's affective signals provide a vital context within which the child organizes emotional experience and regulates "felt security" (Sroufe & Waters, 1977). The specific strategies employed by an individual in order to maintain a set goal of felt security are viewed as contingent on an individual's history of regulating distress with attachment figures. Kobak and Sceery (1988) suggest that if the attachment figure is available and responsive to the child's distress signals, the child learns that distress can be regulated with strategies that involve active seeking of comfort and support from that figure. In other words, in this secure attachment relationship, the child learns that open communication and expression of emotion serve to get their needs met (Feeney & Noller, 1996; Kobak, Cole, Ferenz-Gillies, Fleming & Gamble, 1993).

In less optimal circumstances, the parent may reject the child's attempt to gain comfort or be inconsistently available and inept at comforting the child (Ainsworth *et al.*, 1978). Instances of distress may come to be associated with negative outcomes, and alternative modes of coping with distress and regulating the attachment system may consequently evolve (Kobak & Sceery, 1988).

As mentioned above, the significance of relational influences on the development of emotion regulation has received a lot of research interest. For example, the nature of the parent-child (generally mother-child) relationship, both before and after attachment has been solidified, has been linked empirically to the development of emotion regulation. Maternal rejection, high levels of maternal psychopathology, poor attachment, parental marital status (e.g. single-parent) and father meeting criteria for a psychiatric diagnosis have all been associated with poorer emotion regulation outcomes (Cassidy, 1994; Cole, Barrett & Zahn-Waxler, 1992; Field, 1994; Goodman, Brogan, Lynch & Fielding, 1993; Hofer, 1994).

Experiences of a secure attachment in the caregiving relationship, on the other hand, have been found to promote preschool children's understanding of negative emotions (Laible & Thompson, 1998) and of mixed emotions (Steele *et al.*, 1999). Furthermore, adolescents with more secure attachment relationships with parents, as assessed with the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987), reported greater use of problem-solving coping strategies relative to emotion-managing strategies when under stress (Armsden & Greenberg, 1987). Lower levels of hopelessness, less externally-oriented locus of control and greater coping skills were also associated with more secure attachments to parents, and to a lesser extent peers, in early to mid-adolescence (Armsden & Greenberg, 1987).

In addition to style of emotion regulation, it seems that experiences within the caregiving relationship can influence the degree to which both negative and positive emotions are expressed. For example, Bell *et al.* (Bell, Avery, Jenkins, Feld & Schenrock, 1985) and Collins and Read (1990) found that college students who were more comfortable with closeness and able to depend on other family members (secure style) and were more emotionally expressive.

In the present study, I predict that participants who rate their parents higher on aspects of the attachment relationship will report that they use problem-solving and reference to others styles of coping more, and non-productive coping less, than participants who score lower on the same aspects of attachment.

1.14 Interaction of intrinsic and extrinsic factors

Southam-Gerow and Kendall (2002) provide a useful metaphor for the way in which intrinsic factors interact with environmental factors in the development of emotion regulation. They suggest that:

"Temperament provides the blueprint and foundation from which and on which emotional development "builds": thus, when considering the "brick and mortar" that emotion regulation and emotion understanding represent, an appreciation of the blueprint and foundation is necessary. This emotional "plan" dictates in many ways the form the "building" can take as well as how the use of various "building blocks" can optimise the overall "design." In addition, the blueprint and foundation also set in motion the beginnings of the relationship of the "building" with the "neighbourhood"' (pg.191-192).

Theorising from the evidence from the New York Longitudinal Study (Chess & Thomas, 1984), Bagley and Mallick (2000) suggest that behaviour problems in childhood and adolescence reflect complex interactions of a variety of factors,

including those within the child (e.g. difficult temperament, central nervous system impairment including hyperactivity attention deficit, neurologically based learning problems, epilepsy, hemiplegia), and those external to the child (the interpersonal environment). They suggest that, although the process of interaction of these factors is complex, there is evidence that parenting practices and caregiver characteristics may have a moderating influence on outcomes associated with temperamental styles (e.g. Nachmias, Gunnar, Mangelsdorf, Parritz & Buss, 1996; Park, Belsky, Putnam & Crnic, 1997).

Few investigators have examined the interactive issue of temperament and parenting. As Rubin *et al.* (Rubin, Booth, Rose-Krasnor & Mills, 1995) point out, this may be because, pragmatically and statistically, research investigating these complex interactive relations may prove to be an "investigator's nightmare" (pg.70). Casey and Fuller (1994) have, however, found some evidence to suggest that children's temperamental characteristics influence the kinds of strategies parents use to help children regulate their emotional experience.

In summary, the previous sections have highlighted some of the main factors thought to influence the development of emotion regulation. Many researchers have emphasized the impact of relational experiences on the development of emotion regulation strategies but the importance of temperament is an area that seems somewhat neglected. Although research in this area is needed, it is beyond the scope of this thesis to attempt to investigate temperamental factors and how they interact with environmental factors.

The following sections discuss the link between attachment and peer relationships and between emotion regulation and peer relationships.

1.15 Attachment and peer relationships

Bowlby (1973), amongst others (e.g. Kerns, 1996; Sroufe & Fleeson, 1986), suggest that the quality of attachments to parents has implications for the nature of a child's interactions and relationships with people outside the family. Empirical studies examining attachment and peer relationships in childhood and adolescence support such claims.

1.15.1 Children

From the child literature, securely attached pre-schoolers have been found to be more empathic and prosocial than their insecurely attached peers (Kestenbaum, Farber & Sroufe, 1989; LaFreniere & Sroufe, 1985). Kerns *et al.* (1996) found that fifth- and sixth-grade securely attached children (as measured by the Security scale, Park & Hazan, 1990) were better liked by classmates whilst Sroufe, Carlson and Shulman (1993) found that 10 to 11 year old securely attached children were rated as more competent with peers by teachers at school and by counsellors at a summer camp. In sum, children securely attached to their mothers have been found to be more socially competent and popular than their insecurely attached peers.

1.15.2 Adolescents

From the adolescent literature, Gold and Yanof (1985) studied adolescent girls' relationships with their mothers and close female friends. Girls' reports of higher levels of affection with their mothers and maternal democratic parenting styles were associated with more intimate relationships with friends[1]. Hauser *et al.* (Hauser, Powers & Noam, 1991) studied 14 to 15 year old adolescents and their parents over a three-year period, assessing adolescent ego development (characterized in part by a greater capacity for supportive relationships), self-esteem and family interaction patterns. They found that adolescent ego development was positively associated with parental acceptance. Rice, Cunningham and Young (1997) showed that both maternal and paternal attachment influences adolescents' competence in social situations. Lieberman *et al.* (Lieberman, Doyle & Markiewicz, 1999) found that security of attachment to both mothers and fathers (as measured by the Kerns Security Scale, Kerns *et al.*, 1996) was related to positive friendship qualities (help, closeness and security) and to lower conflict in adolescent friendship relations. In a sample of 508 families with adolescents, Dekovic and Meeus (1997) found that positive self-concept and warm supportive parenting each contribute unique variance to the quality of adolescents' peer relationships.

In a key study, Schneider and Younger (1996) examined the dimensions of the Inventory of Parent Attachment (Armsden & Greenberg, 1987), which claims to measure the parent-adolescent relationship in terms of trust, communication and

[1] As will be discussed later in the section on adolescence, these findings also suggest that close relationships with parents do not diminish in adolescence in favour of peer relationships.

alienation, in relation to the Interpersonal Competence Questionnaire (Buhrmester, Furman, Wittenberg & Reis, 1988), a measure which aims to assess interpersonal functioning with peers in terms of initiation, assertion, disclosure, conflict management and emotional supportiveness. They expected to find strong positive correlations between measures of parent-adolescent attachment and measures of adolescents' interpersonal competence. They also predicted that they would find stronger correlations between attachment and the more intimate aspects of interpersonal competence than other aspects such as conflict resolution. With a sample of sixty-three 10^{th} grade pupils they found moderate correlations between the trust and communication subscales for each parent but no significant relationship between these two positive aspects of attachment and alienation. They found that alienation to fathers was negatively related to all aspects of interpersonal competence and that alienation to mothers was negatively related to conflict management. They did not find any other correlations between aspects of attachment and interpersonal competence. Furthermore, contrary to their hypothesis, they did not find that there were differential correlations between attachment and different aspects of interpersonal relations.

Schneider and Younger (1996) conclude that there may be a particularly strong impact of alienation from parents on interpersonal competence. They point out that their non-significant findings in terms of the relationship between alienation and the positive aspects of attachment is not in line with previous studies (e.g. Armsden & Greenberg, 1987). They suggest that one possible reason why their findings differed from Armsden and Greenberg (1987) is that during adolescence the aspects of attachment may be more differentiated than with young adults (as in Armsden & Greenberg's 1987 study). They also note that their sample may have been a disproportionately well-functioning group of adolescents as the researchers re-approached subjects of a previous study of which only 9% were willing to participate again.

The issue of sample size in Schneider and Younger's (1996) study seems to be the most salient criticism. In a meta-analytic review of attachment in adolescence Rice (1990) reported an average correlation index of .22 between attachment and adjustment, indicating a medium effect size (Cohen, 1992). For correlational studies, Cohen (1992) states that in order to find a medium effect size similar to previous studies, at the 0.05 level of significance, studies need to have a sample size of at least

85. Schneider and Younger's sample is therefore not large enough to reject their hypotheses. Specifically, they cannot conclude that there are no significant relationships within the subscales of the IPA and between the IPA and the ICQ because of their insufficient sample size.

In summary, Schneider and Younger's (1996) study attempted to replicate previous findings regarding the link between attachment and social functioning in adolescence and to examine in more detail the links between specific aspects of attachment and the more intimate dimensions of interpersonal competence. They did not find similar results to previous research (e.g. Armsden & Greenberg, 1987; Kobak & Sceery, 1988) this, however, may be because of the insufficient power of their study. Because previous research evidence suggests that children and adolescents differ as a function of their attachment style on a variety of important social indices, it seems that Schneider and Younger's (1996) results should be considered with caution and it is pertinent to carry out more research in this area, perhaps further exploring these measures.

1.16 Attachment and romantic relationships

As young people go through adolescence, opposite sex friendships emerge and romantic relationships develop. The quality of the attachment relationship has been linked not only with the development of intimacy in close friendships but also with the ability to form romantic relationships.

Hazan and Shaver (1987) proposed that experiences within primary caregiving relationships influence representations of romantic relationships, because both relationships serve similar attachment functions. They predicted that someone with a secure representation of parental attachment would be comfortable seeking their romantic partner in times of distress. Someone with an anxious-avoidant (dismissing) representation of attachment to parents would be hesitant to depend on their partner. Finally, a person with an anxious-ambivalent (preoccupied) representation of attachment to parents would feel uncertain about a partner's availability and, therefore, find it difficult to be comforted by them.

Studies using both self-report and interview measures of parent-child relationships and adult romantic attachment styles have provided evidence to support these ideas

(Collins & Reed, 1990; Feeney & Noller, 1990; Hazan & Shaver, 1987; Owens, Crowell, Pan, Treboux, O'Connor & Waters, 1995).

Furman *et al.* (Furman, Simon, Shaffer & Bouchey, 2002) studied adolescents' working models and styles for relationships with parents, friends and romantic partners. On the basis of their results they suggest that views of friendships may mediate the links between views of relationships with parents and those of romantic relationships. In other words, it may be that experiences of primary caregiving relationships may influence later social competence both within close friendships and within romantic relationships.

Although the current study will not specifically examine romantic relationships in adolescence, it is important to note that the development of intimate friendships may be a vital stage in preparing the person for emerging romantic relationships.

1.17 Intergenerational correlations

High levels of concordance have been found between maternal models of attachment and infant attachment (as assessed by the Adult Attachment Interview, George, Kaplan & Main, 1985) with concordance ranging from 66% to 82% of the cases (Ainsworth & Eichberg, 1991; Fonagy, Steele & Steele, 1991; Main & Goldwyn, 1990). Main *et al.* (Main & Goldwyn, 1984; Main, Kaplan & Cassidy, 1985) suggest that the association between maternal working models and infant attachment status is mediated through maternal behaviour during mother-child interactions. They propose that mothers who have integrated their own early experiences with their caregivers into a coherent model, are more likely to respond sensitively to their infant. Several studies provide some support for the link between maternal working models and maternal behaviour during interactions with the child (e.g. Cohn, Cowan, Cowan & Pearson, 1992; Crowell & Feldman, 1988).

Steele *et al.* (1999) report results from a six-year longitudinal study investigating intergenerational patterns of attachment and the effects of early relationships upon subsequent social, emotional and cognitive development. They found that six-year-old children's performance on an affect understanding task was predicted by security of the infant-mother attachment relationship (as assessed in the Strange Situation at one year) and security or autonomy in the mother's representations of, and reflections

upon, her attachment history (as assessed with the Adult Attachment Interview (AAI) – during pregnancy) prior to the child's birth.

Therefore, it seems that attachment histories, and the degree of coherence of mental representations, are not only important for the development of peer relationships and romantic relationships but also impact on parenting style with the effect of intergenerational transmission of attachment styles.

1.18 Social learning theory and peer relationships

Attachment theory is one of several perspectives that attempt to explain the effect of early relationship experiences on later bonds. Social learning theory, for example, proposes that children acquire social skills via observing, and learning from, other people, especially their parents (e.g. Bandura, 1977). Parents are also thought to directly influence their children's social experiences with peers through coaching and/or shaping appropriate social behaviours (Lollis, Ross & Tate, 1992).

The fundamental difference between social learning theory and attachment theory is that the former model emphasizes the prosocial, caregiving behaviours observed and imitated, rather than the underlying emotional experience of the child with the mother. Attachment theory, on the other hand, emphasizes the importance of the mother's responsiveness and sensitivity to the child in consolidating the child's emotional security and expectations concerning the receipt of care from her and perhaps from others (Belsky & Cassidy, 1994).

It is possible that the attachment model and the social learning model each may contribute to the understanding of the links between the caregiving experience and later social functioning. Indeed the attachment relationship may give children the opportunity to learn how to manage intimacy and closeness; important for the formation of close friendships (Youngblade & Belsky, 1992), whilst the social skills learned within the family may be more crucial for the development of social skills (Coie & Kupersmidt, 1983; Dodge, 1983).

1.19 Emotion regulation and peer relationships

Gottman and Mettetal (1986) propose that emotion regulation skills are crucial for managing the various demands present in interpersonal situations such as being able to resolve conflicts. In support of this, researchers have found that emotional

competence, in terms of emotion regulation and expression, is related to peer status. For example, Hubbard and Coie (1994) found that higher status boys used more constructive coping strategies, whereas rejected children were more moody and emotionally negative around peers. More generally, Eisenberg *et al.* (1995; Eisenberg, Fabes *et al.*, 1997; Eisenberg, Guthrie *et al.*, 1997) found that emotion regulation measures related to children's socially appropriate behaviour.

1.20 Attachment, emotion regulation and peer relationships

As previously mentioned, many theorists have suggested that the patterns of emotion regulation that develop within the parent-child relationship are internalised by the child and then displayed in other interpersonal contexts (e.g. Bowlby, 1973; Cassidy, 1994; Kobak & Sceery, 1988; Lieberman *et al.*, 1999).

Specifically, Kobak and Sceery (1988) propose that, through the parent-child attachment relationship, secure children develop an ability to regulate negative affect constructively, enabling them to display positive emotions that benefit interactions with peers. On the other hand, insecure children may learn to display affect in a socially unacceptable manner, which may be less conducive to positive peer relations. In other words, it is thought that the attachment relationship plays an important role in influencing children's relations with peers, partly through the child's style of coping and displaying affect in peer interactions.

1.20.1 Children

From the child literature, Waters, Wippman and Sroufe (1979) found that children classified as secure in the Strange Situation displayed more smiling and affective sharing with peers compared to those who had been judged as anxiously attached. Similarly, Sroufe (1983) found that secure children were rated by teachers and observers in a preschool setting as showing less negative affect, being more socially competent, and having more friends. They were able to use positive affect to initiate, respond to and sustain interaction with acquainted peers (Sroufe, 1983). Sroufe *et al.* (1984) summarised that not only do secure children demonstrate an ability to tolerate negative affect while maintaining constructive engagement with others, but they also are able to display positive emotions that enhance social interaction and social competence.

Park and Waters (1989) found that secure-secure friend pairs show more positive affect during play than do secure-insecure friend pairs and Sroufe (1983) found that securely attached children displayed less negative affect and "whining" than insecurely attached children when playing with familiar peers. Finally, Contreras *et al.* (2000) examined whether coping strategies partly mediate the association between attachment and social behaviour with peers in a sample of preadolescents. Their results indicated that constructive coping was related to both attachment (as measured by the Security Scale, Kerns *et al.*, 1996) and peer competence and mediated the association between attachment and peer competence. This evidence suggests that emotion regulation is at least one of the mechanisms by which experiences within the caregiving relationship influence the experiences of later relationships outside the family.

1.20.2 Adults

Literature from research with adults, using Adult Attachment Interview (AAI, George *et al.*, 1985) classifications, suggest that, across both peer and self-report ratings, securely attached adults are the best adjusted in terms of emotion regulation and peer relationships. Block (1982), for example, found that the secure pattern is associated with the ability to constructively modulate negative feelings in problem-solving and social contexts. Furthermore, this group reported higher levels of support from family than did the Dismissing group[2]; a finding that suggests that this group views attachment figures as available and supportive during times of distress (Kobak & Sceery, 1988). Feeney and Noller (1996), in a study examining conflict resolution, found that securely attached adults used more constructive strategies, such as negotiation and compromise, to deal with conflict in their dating relationships.

1.20.3 Adolescents

From the research investigating adolescents, it has been found that young people with insecure attachment representations (based on the AAI) tend to show more dysfunctional anger (Kobak *et al.*, 1993) and to display fewer positive emotional expressions (Becker-Stoll, Delius & Scheitenberger, 2001). Similar to research with adults, adolescents' attachment status has been found to be a factor influencing the frequency, intensity and resolution of conflict in their relationships. Kobak *et al.* (1993), for example, found that in a conflict resolution task with their mothers, secure

[2] The dismissing style is comparable with the infant avoidant A pattern (Howe, Brandon, Hinings & Schofield, 1999).

14 to 18 year olds expressed less dysfunctional anger and avoidance and maintained more balanced assertiveness than their insecurely attached peers. Furthermore, Lieberman *et al.* (1999) found that more secure attachment was related to lower conflict in friendship relations. They suggested that adolescents with more secure attachment relationships might learn better conflict resolution skills and be more adept at controlling their negative affect and expressing positive affect compared to less securely attached adolescents.

In summary, a consistent finding in the attachment literature is that security of attachment is related to affect regulation in social relationships (e.g. Collins & Read, 1990). It seems that individual differences in the regulation of positive and negative affect are likely to develop in part through the caregiving experience and may translate into qualitative differences in close relationships. Indeed Rice (1990) suggests that secure attachment relations may support exploration and mastery of the environment leading to adjustment in interpersonal functioning and emotional development (as well as cognitive development and academic skills).

1.21 Bi-directional influence of parents and peers on emotion regulation and social competence

When examining interpersonal influences on the development of emotion regulation, it may be overly simplistic to separate the differential influences of parents, peers and friends because there are likely to be reciprocal influences between the different relationships, both concurrently and longitudinally. Emotional experiences with parents, for example, tend to inform school-age children's emotional behaviour with their peers (e.g. Isley, O'Neil, Clatfelter & Parke, 1999), but among adolescents the reverse may apply. This may be owing to the fact that as adolescents separate and individuate from their caregivers, they spend more time with their peers than their parents and the peer group becomes the more salient role model. Indeed Berndt (1982) argued that because same-sex friendships are closer and more intense in early adolescence than in any other phase of the life span (e.g. Douvan & Adelson, 1966) such friendships are likely to have a major influence on the development of social skills and social behaviour. Furthermore, Buhrmester (poster presentation, 2002) found evidence to suggest that competence and social experience recursively shape one another over time, suggesting that it is difficult to tease apart the antecedents of competence.

1.22 Revisions to internal working models

It is important to note that, although research has emphasized the stability of an individual's attachment style, early experiences do not necessarily override all subsequent life experiences (Kerns, 1996). Indeed Bowlby viewed the psychotherapeutic relationship as a potential attachment relationship with the power to modify the influence of early attachments on subsequent affectional and non-affectional bonds. Bowlby (1988) proposed that a therapist's principal job is to serve as an attachment figure: to provide the patient with a secure base from which to explore and to rework his or her working models of self and others.

Many theorists (e.g. Main *et al.*, 1985; Thompson, Lamb & Estes, 1982; George & Solomon, 1991) point out that expectations about relationships may also be modified in the context of other attachment relationships (e.g. with partners) or the experience of life stress or new experiences.

1.23 Why study adolescence?

1.23.1 Paucity of research

Lieberman *et al.* (1999) point out that, despite the claims by theorists that early parent-child interactions affect interpersonal functioning throughout the lifespan (e.g. Bowlby, 1973, 1980), and the impact has been observed and studied in infants, young children (e.g. Ainsworth *et al.*, 1978; Main *et al.*, 1985) and adults (e.g. Block, 1982; Kobak & Sceery, 1988), the study of attachment in adolescence has not expanded to the same degree (Armsden & Greenberg, 1987; Kerns *et al.*, 1996; Rudolph, Hammen & Burge, 1995). It is only since the 1980s that researchers have begun to look at parent-adolescent attachment (e.g. Dekovic & Meeus, 1997; Gold & Yanof, 1985; Hauser *et al.*, 1991; Lieberman *et al.*, 1999; Kobak *et al.*, 1993; Rice *et al.*, 1997).

1.23.2 Development of intimacy, security and trust as dimensions of peer relationships in adolescence.

It seems logical to study this developmental stage partly because, as Schneider *et al.* (Schneider, Atkinson & Tardif, 2001) point out, the features of friendship that match most directly many of the central features of secure attachment – especially intimacy, security and trust – appear as major aspects of children's peer relationships from preadolescence onwards. The development of intimacy in relationships has, in fact, been proposed to be a central feature of adolescence (Buhrmester, 1990; Sullivan,

1953) with children's friendships becoming increasingly intimate and more comparable to those of adults (Furman & Buhrmester, 1992). Berndt (1982) suggested that heightened levels of intimacy and mutual responsiveness might be triggered by the cognitive changes occurring around puberty. He proposed that a more mature understanding of reciprocity and equality in friendships means adolescents become more capable of sharing thoughts and feelings with friends.

In sum, many researchers have suggested that the extraordinary intensity of adolescent-peer relationships, perhaps facilitated by the cognitive developments at this time, are similar to attachment relationships (Ainsworth, 1989; Ainsworth & Marvin, 1995; Allen, Moore, Kuperminc & Bell, 1998; Bowlby, 1988). The ability to establish intimacy at this developmental stage requires, however, a number of relationship skills – for example, the ability to self-disclose, to provide social support and to resolve conflicts (Buhrmester, 1990). It is likely that these skills are influenced, as previously mentioned, partly by experiences in the caregiving relationship.

It is important to note that, although previous models of family functioning emphasized detachment as part of the developmental course of parent-child relationships in adolescence (Blos, 1967; Freud, 1958), newer models, based on Bowlby's lifespan view, highlight the importance of attachment or connectedness to parental figures during the adolescent years, despite decreases in shared activities and interactions (Larson, Richards, Moneta, Holmbeck & Duckett, 1996; Steinberg, 1990).

In line with this, Kerns *et al.* (1996) propose that in middle childhood and adolescence, children continue to rely on attachment figures as a secure base from which to explore and as a source of comfort in times of stress. Indeed research on parent-adolescent attachment indicates that parental relationships remain important to adolescents, and are often valued as sources of intimacy (e.g. Paterson, Field & Pryor, 1994).

Contrary to current theory and the above evidence, Papini, Roggman and Anderson (1991) found that self-reported attachment security to both parents decreased with pubertal maturity. They refer to the emotional-distancing hypothesis that perceived attachment to parents diminishes with advanced pubertal maturity. Lieberman *et al.*

(1999) suggest, however, that these broad changes may be because certain elements of the attachment relationships change with age. Specifically they propose that:

"As children develop better coping strategies and become more capable, their self-perceptions as needy and as wanting parental help may change, while their perceptions of others as providers of help in times of stress should remain stable" (pg.203).

In summary, it is particularly interesting to study this developmental stage because of the development of autonomy from parents and the establishment of intimate friendships (Havinghurst, 1953) both of which are thought to be influenced by parenting experiences.

1.24 Clinical Population

Sroufe and Rutter pointed out in 1984 that relatively little attention had been paid to the relation of attachment processes to the development of psychopathology beyond childhood, particularly in the adolescent years, despite the acknowledgement that attachment is an important developmental issue throughout the life span. Since their publication, several studies have emerged including studies of attachment and adolescent affect regulation and symptom reporting (Cole-Detke & Kobak, 1996; Kobak & Sceery, 1988; Lapsley, Varshney & Aalsma, 2000; Rosenstein & Horowitz, 1996; Scott Brown & Wright, 2001; Scott Brown & Wright, 2003).

1.24.1 Higher incidence of insecure attachment styles in adolescent clinical populations

Rosenstein and Horowitz (1996) conducted a study with 60 psychiatrically hospitalised adolescents, of which the majority (98%) were classified as having an insecure attachment with their mothers (as measured by the Adult Attachment Interview; George *et al.*, 1985). Similarly, Scott Brown and Wright (2003) found that the clinical group of adolescents they studied displayed significantly more ambivalent and avoidant attachment patterns (as measured a modified Separation Anxiety Test) compared with the non-clinical group. Both groups of researchers conclude that their studies substantiate the link between quality of attachment and clinical status during adolescence and support a model of the development of psychopathology based partially on relational experiences with parents (Rosenstein & Horowitz, 1996; Scott Brown & Wright, 2003).

Scott Brown and Wright (2003) suggest that Kobak *et al.'s* (1993) control theory may help to explain the higher incidence of insecure attachment patterns in the clinical group. This theory proposes that people classified as having ambivalent attachment patterns report significantly higher levels of interpersonal difficulties and symptomatology due to use of a hyperactivating strategy. This strategy is employed with the aim of activating caregiving responses through exaggeration and magnification (relative to those with other classifications). Such a strategy, according to attachment theory, could be viewed as the individual striving to adapt to the caregiving environment with which he or she is faced.

Kobak *et al.* (Kobak, Sudler & Gamble, 1991) suggest that the significantly higher levels of anxiety and depression, internalising symptoms and thought disorder in ambivalent individuals, compared to other groups (e.g. Cole-Detke & Kobak, 1996; Cooper *et al.*, 1998; Dozier, 1990; Dozier & Lee, 1995; Kobak & Sceery, 1988; Kobak *et al.*, 1991; Pianta, Egeland & Adam, 1996; Rosenstein & Horowitz, 1996; Van Ijzendoorn & Bakermans-Kranenburg, 1996) fits with a hyperactivating strategy in that each can be thought of as inwardly focused symptom types.

The finding that adolescents classified as having an avoidant pattern were not significantly different from those with secure attachments may also be consistent with the proposal that a deactivating strategy is used (Kobak *et al.*, 1991). Avoidant adolescents have been found to be more likely to minimize vulnerabilities and to overlook difficulties in order to avoid distress (Cole-Detke & Kobak, 1996). The lower levels of interpersonal difficulties and symptomatology reported could be consistent with such a strategy. Previous studies indicate that individuals showing deactivating strategies would be indistinguishable from those with secure strategies (e.g. Dozier & Lee, 1995), which Scott Brown and Wright's study (2003) substantiates. Adolescents displaying 'dismissing' patterns have, however, been found to be more likely to display externalising symptoms (Reimer, Overton, Steidl, Rosenstein & Horowitz, 1996) and engage in criminal behaviour and drug use (self-reported) (Allen *et al.*, 1996).

1.24.2 Attachment, emotion regulation, social competence and mental health

The higher incidence of insecure attachment style in clinical populations is in line with the proposal that emotion regulation is fundamental in the development of socio-emotional competence and mental health (e.g. Gross & Munoz, 1995; Hubbard &

Coie, 1994; Linehan, 1993; Stifter *et al.*, 1999). More detailed evidence for such links includes the finding that adolescents who report higher levels of depressive symptoms also report lower use of autonomy-related emotion regulation (Kobak & Ferenz-Gilles, 1995). In addition, children in psychopathological groups have demonstrated a limited understanding of emotion regulation and coping (e.g., Meerum-Terwogt, 1990; Meerum-Terwogt, Schene & Koops, 1990; Taylor & Harris, 1984). For example, Taylor and Harris (1984) found that "maladjusted" children were less likely to explain display rules or note an emotion control strategy compared to their non-disordered peers (Taylor & Harris, 1984). Additionally, "maladjusted" youths expressed several dysfunctional beliefs about emotion regulation, such as "It is not possible to change one's emotions" (Meerum-Terwogt, 1990; Meerum-Terwogt *et al.*, 1990).

In summary, given the higher prevalence of insecure attachment styles, maladaptive emotion regulation skills and interpersonal skills deficits within clinical populations, and the paucity of research examining such factors in adolescent clinical samples, it seems relevant to study this population of young people in addition to a non-clinical sample. One aim of this study, therefore, is to examine the differences between a clinical and non-clinical sample in terms of parenting experiences, coping styles and interpersonal competence.

1.25 Gender differences

1.25.1 Impact of maternal and paternal attachment on socioemotional development

There is some research evidence regarding the differential impact of attachment to mothers and fathers on social development. In particular, the evidence so far seems to emphasise that fathers may have an independent contribution to make to their child's socioemotional development. For example, although a secure attachment to the mother has been found to be the major predictor of the quality of subsequent relationships in early childhood (Main *et al.*, 1985; Suess *et al.*, 1992; van Ijzendoorn, 1995), attachment to father has, in some studies, been found to be more consistently related to children's peer relationships (e.g. Kerns & Barth, 1995; Rice *et al.*, 1997; Youngblade & Belsky, 1992; Youngblade, Park & Belsky, 1993).

Hosley and Montemayor (1997) propose that, although fathers may have more distant relations with their adolescent children than mothers, they may make unique contributions. They propose that fathers may express caring and closeness through shared activities and found that both adolescent boys and girls report enjoying interactions more, and having less conflict with fathers than with mothers. Indeed Lieberman *et al.* (1999) found that, whilst levels of security, to both mother and father, were negatively related to conflict with friends, fathers' availability was particularly important for lower conflict in friendships. They suggest that available fathers may spend more time in play interactions with their children, contributing to the learning of emotion regulation. Mallinckrodt (1992) found that undergraduate student's perceptions of both paternal and maternal emotional responsiveness were positively associated with social self-efficacy and perceived social support.

Thus mothers and fathers may influence their adolescents' security and attachment quality in different ways but it seems that more research is needed to examine the effects of the security of attachment with each parent on adolescents' peer relationships.

The above evidence highlights the importance of examining adolescents' attachments to both parents; therefore self-report correlates of adolescents' attachment to both mother and father were examined in the present study. However, given that relationships within the family are often interrelated and interdependent, it is likely that mother-adolescent and father-adolescent relationships may function together to influence adolescent outcomes. Suess *et al.* (1992), for example, found that attachment to father and mother taken together was more predictive of children's social competence than mother attachment alone.

1.25.2 Gender differences in attachment to parents

Several researchers have found no significant differences between male and female participants in their reports of attachment to parents (e.g. Armsden & Greenberg, 1987; Kenny, Lomax, Brabeck & Fife, 1998; Kenny, Moilanen, Lomax & Brabeck, 1993; Rice, FitzGerald, Whaley & Gibbs, 1995). No gender difference in attachment to parents was therefore expected in this study.

1.25.3 Gender differences in emotion regulation

There is some evidence to suggest gender differences in beliefs about the need to control emotions, with boys more often reporting the importance of less expression (Underwood, 1997; Zeman & Shipman, 1997). However, concerning beliefs about the consequences of emotional expression, gender differences are less clear, with one study indicating that girls expect more negative reactions from peers than boys (Underwood, 1997) while another project found that boys expected more negative consequences for emotional displays (Zeman & Shipman, 1997) than girls.

There is some research evidence to suggest that females, more than males, tend to rely on social supports as a coping strategy (e.g. Frydenberg & Lewis, 1999; Stark, Spirito, Williams & Guevremont, 1989) and strategies such as tension reduction, self-blame and worry (Frydenberg & Lewis, 1999). In contrast, males have been found to be more likely to seek relaxing diversions or physical recreation, to ignore the problem or to keep problems to themselves (Frydenberg & Lewis, 1999).

Several researchers, however, have found no significant gender differences in adolescence regarding styles of coping. For example, Mullis and Chapman (2000) found no significant gender differences as measured by the Adolescent Coping Orientation for Problem Experiences (ACOPE; McCubbin & Thompson, 1987) whilst other researchers found no such differences as measured by the Adolescent Coping Scale (Frydenberg & Lewis, 1993) (e.g. DeMello & Imms, 1999; Neill & Proeve, 2000; Plucker, 1998).

Because there seems to be mixed evidence regarding gender differences and coping styles, no specific predictions were made in this study.

1.25.4 Gender and interpersonal competence

It is important to note that peer interactions in adolescence, in addition to previous attachment experiences, may influence interpersonal styles (Buhrmester, 1990). This is highlighted in the gender differences found in interpersonal competence in adolescence. Maccoby (1990), for example, has argued that same-sex peer relations are an important socializing context that shapes the development of gender differences in social-interaction styles. Female to female friendships are thought to foster a "communal-oriented style of relating" that emphasizes self-disclosure and the

provision of emotional support. On the other hand male to male friendships are thought to foster an "agentic-oriented style of relating" that emphasizes achievement, recognition and power.

Buhrmester (1996) found gender differences in adolescents' interpersonal competence, which supports Maccoby's proposals. He found that, overall, females scored higher on (*all*) five domains of interpersonal competence (negative assertion, relationship initiation, conflict management, self-disclosure and emotional support, as measured by the Interpersonal Competence Questionnaire, ICQ; Buhrmester, Furman, Wittenberg & Reis, 1988) but differences between males and females were highest for self-disclosure and emotional support. This finding was consistent across measurement methods (self-reported, friend-reported and mother-reported). Buhrmester's (1996) conclusions from this study was that girls' friendships provide more of the intimacy experiences that perhaps fosters girls' greater skill in self-disclosure and the provisions of emotional support. He is careful to add that the direction of causation could run in the opposite direction: that girls' greater skill at self-disclosure and provision of support may enable them to have more intimate friendships. He concludes that the evidence clearly suggests that experiences in same-sex friendships are tied to gender differences in interpersonal competence (Buhrmester, 1996).

Thus, the present study examined adolescent gender as well as parent gender regarding attachment-adjustment associations in an attempt to clarify the respective influences of maternal and paternal parent-adolescent relationships on sons and daughters. Further, gender differences in coping styles and interpersonal competence were examined. It was predicted that females would score significantly higher on self-disclosure and emotional support than males.

1.26 Measurement issues

1.26.1 Construct validity of attachment measures

A quote by Griffin and Bartholomew (1994) highlights the importance of measurement issues:

"*Any* test of *any* theory is limited by the quality of the measurement procedures used in that test" (pg.18).

Since Hazan and Shaver (1987) validated their self-report instrument for measuring attachment, many other researchers have designed tools to define the dimensions and parameters of adults' attachment (e.g. Armsden & Greenberg, 1987; West & Sheldon, 1988). To ensure that researchers are communicating about the same constructs, the theory in question needs to be at the forefront of the researcher's mind when selecting from the wide array of measuring instruments (Brennan, Clark & Shaver, 1998).

Griffin and Bartholomew (1994) discuss the metaphysics of measurement in the case of adult attachment. I will briefly mention the three dominant approaches to conceptualising and measuring individual differences in adult attachment[3]:

1. The dimensional approach characterises the individual as a point along a continuous dimension.
2. The grouping or categorical approach which is the original – and most common – method of measuring infant attachment in the Strange Situation. Owing to Hazan and Shaver's (1987) translation of infant attachment groups into an adult attachment measure, the categorical approach has also come to dominate research in adult attachment.
3. The prototype approach to categorization allows for the complex patterns of individual differences that may define 'types' of persons, while also recognizing that not all members of a group are equally good exemplars of that group. This approach aims to integrate and address the limitations of both dimensional and categorical approaches to the measurement of individual differences.

Although Griffin and Bartholomew (1994) favour a prototypical approach to assessing attachment, the two measures currently available (Relationship Questionnaire, Bartholomew & Horowitz, 1991; Relationship Scales Questionnaire, Griffin & Bartholomew, 1994) have not been shown to be developmentally appropriate for adolescents. Furthermore, I was interested to examine specific aspects of the parent-adolescent relationship rather than attachment styles. I therefore wanted to select a self-report measure that was dimensional and had been found to be valid and reliable for adolescents.

There are advantages to the dimensional approach (from which the prototype approach also benefits) such as retention of information (rather than loss of

[3] The pros and cons of each approach are discussed by Griffin and Bartholomew (1994) but are beyond the scope of this thesis.

information that comes with dividing people into groups on the basis of arbitrary procedures such as median splits), it can offer the flexibility associated with correlational data analysis and can be analysed by techniques ranging from simple correlations to multiple regression to structural equation modelling and multi-item scales based on a dimensional approach are usually highly reliable (Griffin & Bartholomew, 1994). Disadvantages include the fact that any "emergent properties" that arise from combinations of the dimensions are lost. In contrast to grouping and prototype approaches, which are explicitly person-centred and designed to paint a portrait of types of individuals, the dimensional approach is variable-centred and focuses on the relations among variables across individuals.

Measures that use continuous ratings of attachment security, such as the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987) may be advantageous to those that classify participants' attachment status, such as the Adult Attachment Interview (AAI) (George *et al.*, 1985), for several reasons. First, Bartholomew and Horowitz (1991) posit that continuous scores enhance a researcher's ability to more precisely assess individual differences. In addition, the AAI may require greater insight into family relationships than adolescents may possess, especially while they are still living with their parents, and it raises a high level of emotional intensity. Furthermore, as adolescents become more independent in their establishment and maintenance of relationships, and rely more on peers for emotional support, measures such as the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987) afford the opportunity to derive measures of unique attachment relationships (mother, father and friends). These relationships may play differing parts in adolescents' emotional lives.

Schneider and Younger (1996) also discuss the difficulty in conceptualizing, and therefore measuring, the construct of attachment in adolescence. They highlight that, although theorists have extended the concept of felt security to apply to adolescents as well as to children, differing views have been expressed as to how to define and measure it in adolescence. Schneider and Younger (1996) make the point that the technique of measuring physical proximity between care giver and child as a way of estimating "felt security" for children, is not appropriate for adolescents. The question they pose is how to conceptualize and measure such security in adolescence. The authors highlight that previous researchers have attempted to measure a variety of different variables which they conceptualize as attachment. As mentioned previously,

they examined the Inventory of Parent Attachment (Armsden & Greenberg, 1987) in relation to indicators of social functioning.

Owing to the fact that this study partly aimed to examine specific aspects of attachment and how they are associated with peer competence in adolescence, the IPPA, which has been standardised on adolescents, seemed to be most suitable. Furthermore, it has been used by previous researchers (e.g. Schneider & Younger, 1996) and therefore selecting this measure would facilitate comparison of results.

1.26.2 Method variance

The issue of method variance i.e. the tendency of measures of a similar type e.g. self-report, to correlate together even when they are intended to assess quite different constructs, was considered when designing the study. Although it is desirable, where possible, to use different measurement methods (e.g. self-report and observer measures) within a study or research program, and not to rely on any one viewpoint or type of measure, given the time constraints of the researcher and teachers, this was not possible.

1.26.3 Self-report measures of attachment

As Bartholomew and Shaver (1998) point out, it is important to recognize that self-report measures of attachment are limited in that they are based on conscious and potentially biased summaries of an individuals' own feelings and experiences. Berlin and Cassidy (1999) point out that, owing to the fact that attachment strategies are thought to include distortions (minimizing and maximizing tendencies), attachment research questions and self-report measures may be problematic. The results of Ducharme and colleagues' study (Ducharme, Doyle & Markiewicz, 2002), however, support the view that self-report measures do indeed relate to adolescents' reports of interpersonal behaviours with parents and friends.

1.27 Goals and unique contribution of the present study

As reviewed above, there have been several studies that have explored the associations between attachment and interpersonal competence in adolescence (e.g. Dekovic & Meeus; Gold & Yanof, 1985; Hauser *et al.*, 1991; Rice *et al.*, 1997; Lieberman *et al.*, 1999; Schneider & Younger, 1996). Given the overall positive findings in terms of the links between attachment and social functioning, it seems relevant to examine *how* these two social worlds are linked. This study aims to

examine emotion regulation as a possible mediating factor between attachment and interpersonal competence. It intends to build upon Contreras and colleagues' (2000) study that examined emotion regulation as a mediator of associations between mother-child attachment and peer relationships in middle childhood. It will differ in terms of sampling young people (aged 11-18) and comparing a non-clinical population to a clinical population. In addition, attachment to mothers and fathers will be examined in relation to the above variables.

1.28 Implications

It is hoped that this study may add to literature that can be drawn upon to improve prevention and intervention programmes for adolescents who struggle with their attachment relationships, behavioural coping styles and interpersonal relationships.

In relation to prevention programmes, it is envisaged that this study will add to the understanding of the importance of maternal and paternal responsiveness and availability in fostering children and young peoples' emotion regulation abilities and interpersonal competencies. Such information would inform the development of parenting programmes. For example the need for caregivers to focus on children's underlying emotions, responding sensitively to their emotional signals and communicating openly about emotions.

From an intervention perspective, therapists may be able to provide corrective relational experiences for clients who have experienced unresponsive and insensitive relationships with attachment figures (Bowlby, 1988). In other words, the therapeutic relationship can be similar to the development of a secure base from which patients may develop social competencies, which in turn may improve emotional functioning (Rice *et al.*, 1997).

1.29 Aims

1. To test for differences between a clinical and non-clinical population in terms of attachment, coping styles and interpersonal competence.
2. To examine which aspects of attachment are related to particular coping styles and to examine how such styles impact on interpersonal competence and attachment to friends.

1.30 Hypotheses

Clinical vs. Non-clinical

Young people attending the day or out patient facilities at the Young People's Unit (clinical population) will report significantly poorer attachments to their mothers and fathers (as measured by the Inventory of Parent and Peer Attachment, Armsden & Greenberg, 1987), score significantly lower on solve the problem and reference to others styles of coping and higher on non-productive coping (as measured by The Adolescent Coping Scale, short version, general form, Frydenberg & Lewis, 1993), have lower interpersonal competence (as measured by the Interpersonal Competence Questionnaire – Revised, Buhrmester, 1990) and poorer attachment to friends (as measured by the Inventory of Parent and Peer Attachment, Armsden & Greenberg, 1987) than young people in the non-clinical population.

Gender

Females will report to be more adept at disclosing personal information to friends and providing emotional support to others than males (as measured by the Interpersonal Competence Questionnaire – Revised, Buhrmester, 1990).

Main hypotheses

H1: Attachment to mother and father (in terms of trust, communication and alienation) (as measured by the Inventory of Parent and Peer Attachment, Armsden & Greenberg, 1987) will be positively related to interpersonal competence (in terms of initiating relationships, self-disclosing, asserting displeasure with others actions, providing emotional support, managing interpersonal conflicts) (as measured by the Interpersonal Competence Questionnaire – Revised, Buhrmester, 1990) and attachment to friends (in terms of trust, communication and alienation) (as measured by the Inventory of Parent and Peer Attachment, Armsden & Greenberg, 1987).

H2: Attachment to mother and father will be positively related to solve the problem and reference to others styles of coping and negatively related to non-productive coping (as measured by The Adolescent Coping Scale, short version, general form, Frydenberg & Lewis, 1993).

H3: Solve the problem and reference to others styles of coping will be positively related to interpersonal competence and attachment to friends whilst non-productive coping will be negatively related to interpersonal competence and attachment to friends.

H4: Coping styles will explain a significant degree of the association between attachment to mothers and fathers and interpersonal competence.

2 Method

2.1 Overview

A cross-sectional, questionnaire survey was employed in this study to test the hypothesized relations between attachment to parents, coping and interpersonal competence in adolescence. A two-sample comparative design, involving clinical and non-clinical groups of adolescents, was used. A total of 200 adolescents completed self-report measures of attachment to parents and friends, coping, interpersonal competence, depression and anxiety.

2.2 Preparation

The study was approved by the Lothian Research Ethics Committee and the Chief Executive of the Lothian Primary Care NHS Trust, in advance of data collection, to ensure ethical standards of research and to obtain permission to recruit participants from the Young People's Unit, Royal Edinburgh Hospital.

2.3 Subjects

According to Cohen (1992), in order to find a medium effect size, at the 0.05 level of significance, when using correlations, I needed to recruit at least 85 participants for the non-clinical sample. In order to find a large effect size, at the 0.05 level of significance, when testing for mean differences between the two populations, I needed to recruit at least 26 participants for the clinical sample.

2.3.1 Total sample

200 adolescents (93 males, 107 females) aged between 11 and 18 years participated in the study on a voluntary basis.

2.3.2 Non-clinical sample

The non-clinical group consisted of 181 secondary school pupils (93 females (51.4%); 88 males (48.6%)) from three schools in Edinburgh (permission granted from the Department of Education, The City of Edinburgh Council). The number of participants recruited from each school appears below in Table 1.

Secondary School	*Number of young people*	*Percent*
Tynecastle High School	16	8.8
St Thomas of Aquin's High School	73	40.3
James Gillespie's High School	92	50.8
Total	*181*	*100.0*

Table 1 Number of non-clinical participants from the three Secondary Schools

2.3.2.1 Sample return rate

90% of the pupils in two classes (S1 and S3) at Tynecastle High School participated on the day of questionnaire administration. For both St Thomas of Aquin's High School and James Gillespie's High School, 100% of the pupils who attended school on the day of questionnaire administration participated in the study.

2.3.3 Clinical sample

The clinical group consisted of 19 young people (5 male; 14 female), between the ages of 14 and 18, currently attending out patient or day patient departments of the Young People's Unit, Royal Edinburgh Hospital. Clinical participants considered by their therapist to be learning disabled, actively suicidal or psychotic or with a diagnosis of Attention Deficit Hyperactivity Disorder or an Autistic Spectrum Disorder were excluded from the study.

2.4 Measures

The main variables measured in this study were attachment to mother, father and friends, coping skills and interpersonal competence. Two questionnaires were included to measure anxiety and depression. A summary of all the measures appears in Table 2 below.

Construct	*Measure*	*Sub-scales*
Parenting & close friendship experiences	Inventory of Parent and Peer Attachment (IPPA) (Armsden & Greenberg, 1987)	Trust Communication Alienation
Coping styles – behavioural outcome of emotion regulation	The Adolescent Coping Scale (ACS) (short version, general form) (Frydenberg & Lewis, 1993)	Solve the problem style of coping Reference to others Non-productive coping
Interpersonal competence	Interpersonal Competence Questionnaire – Revised (ICQ–R) (Buhrmester, 1990)	Initiating relationships Disclosing personal information Asserting displeasure with others Emotional support and advice Managing interpersonal conflict
Depression	The Beck Depression Inventory FastScreen for Medical Patients (Beck, 2000)	
Anxiety	The Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown & Steer, 1988)	

Table 2 Measures used in the study

(i) Parent and peer attachment

The Inventory of Parent and Peer Attachment (IPPA) (Armsden & Greenberg, 1987) is a self-report questionnaire with 25 items in each of three sections: mother, father and peers, yielding three attachment scores (Appendix 1). The measure was developed to explore adolescents' perceptions of the positive and negative affective and cognitive dimensions of relationships with parents and close friends and how well these attachment figures each provide "psychological security."

Armsden and Greenberg (1987) used attachment theory (Bowlby, 1973), as the theoretical framework behind the development of the IPPA. The measure includes three subscales for each attachment figure: degree of mutual trust, quality of communication and extent of anger and alienation. Responses use a five-point Likert scale format, asking how often each statement is true about the attachment figure ("Almost Always or Always" to "Almost Never or Never"). Items for both parents are the same and items for peers are similar to those for parents.

The Trust/felt security subscale aims to measure the degree to which that attachment figure understands and respects her or his needs and desires e.g. "My mother respects my feelings", "My mother accepts me as I am". The Communication subscale aims to measure the degree to which the respondent perceives the attachment figure as sensitive and responsive to her or his emotional states and is helpful with concerns e.g. "I feel it's no use letting my feelings show around my mother" (reverse-scored), "Talking over my problems with my mother makes me feel ashamed or foolish" (reverse scored), "I tell my mother about my problems and troubles". The Alienation subscale aims to assess the degree of anger toward or emotional detachment from attachment figures, since frequent and intense anger or detachment are seen to be responses to actual or threatened disruption of an insecure attachment bond e.g. "My mother expects too much from me" (reverse-scored), "When we discuss things, my mother cares about my point of view", "I don't get much attention from my mother" (reverse-scored).

The original samples used to develop the measure ranged from 16-20 years in age, but the IPPA has also been used successfully with samples as young as 12 (Armsden & Greenberg, 1987). The instrument shows good reliability in samples to date. Three-week test-retest reliabilities were .93 for parent attachment and .86 for peer attachment in a sample of late adolescents (Armsden & Greenberg, 1987). The

reliability coefficient for trust, communication and feelings of anger and alienation as reported by Armsden and Greenberg (1987) for Parental Attachment are: .91, .91 and .86 respectively. Reliability coefficient for the three domains for Peer Attachment Scale are: .91, .97 and .86 respectively. Internal reliabilities were high: Mother Attachment, Cronbach's alpha = .87, Father Attachment, alpha = .89, and Peer Attachment, alpha = .92 (Cronbach, 1951).

Validity of the IPPA has been established through correlations with subscales on several measures of family environment, including positive family coping, as well as measures of social self-concept, depression and self-esteem (Armsden & Greenberg, 1987). Peer attachment has shown to be positively related to social self-concept and family expressiveness and negative associations with loneliness (Armsden & Greenberg, 1987).

A number of personality variables have also been shown to be related to the IPPA, including positivity and stability of self-esteem, life-satisfaction, and affective status, such as depression, anxiety, resentment/alienation, covert anger, and loneliness (Armsden, 1986; Armsden & Greenberg, 1987) in late adolescents. As mentioned in the introduction, Schneider and Younger (1996) also used the IPPA (without the peer attachment sub-scale) to examine attachment and interpersonal competence in adolescence. Adopting the same measure will facilitate comparison of results.

Total IPPA attachment scores for mother-figures, father-figures, and peers were computed by summing the 25 items in each figures section after reverse-scoring items noted in Armsden and Greenbergs' (1987) guidelines. IPPA subscales of trust, communication, and alienation were also computed following their guidelines (see Appendix X). The alienation subscale scores were reversed i.e. a high score on the alienation subscale indicated low levels of anger and hostility felt towards the attachment figure in accordance with the guidelines.

(ii) Emotion regulation

The Adolescent Coping Scale (ACS) (short version, general form) (Frydenberg & Lewis, 1993), a self-report measure consisting of 19 items in a five-point Likert format (Appendix 2), was used as a measure of the behavioural outcome of emotion regulation. This general form addresses how an individual copes with concerns in general and was chosen because researchers have found that a person's choice of

coping strategies is largely consistent regardless of the nature of the concern (Frydenberg & Lewis, 1994). The Short Form, rather than Long Form (80 items), of the ACS was chosen because it has been demonstrated to be a useful indicator of a respondent's performance on the Long Form of the instrument and time did not permit the use of the longer instrument.

Frydenberg and Lewis (1993) claim that the ACS, which was developed over a course of five years of research and several refinements, is the most comprehensive instrument of its kind. They argue that the items in the questionnaire are highly relevant to adolescents' concerns since the content was originally generated by adolescents. Frydenberg and Lewis (1996) suggest that our understanding and measurement of adolescent coping can be assisted by reference to the 18 strategies and three styles identified by the ACS. The three styles, each comprising between four and eight strategies, are described by these researchers as a) attempting to solve the problem whilst remaining physically fit and socially connected, b) referring to others in a bid to deal with the concern and c) avoidance strategies generally associated with an inability to cope (Frydenberg & Lewis, 1996).

The reliability and validity of the Short Form of the ACS was demonstrated by Frydenberg and Lewis (1996). They reported a mean magnitude of consistency and reliability indicators for the scale as .7 and .68 respectively. Overall, this study showed the value in utilising the ACS when measuring adolescent coping strategies. According to Frydenberg and Lewis (1996), the use of coping styles is particularly relevant when the Short Form of the ACS is administered.

Examples of items:

Style 1 Solving the problem: e.g. "Work at solving the problem to the best of my ability." "Work hard." "Look on the bright side of things and think of all that is good."

Style 2 Reference to others: e.g. "Talk to other people about my concern to help me sort it out." "Join with people who have the same concern." "Ask a professional person for help."

Style 3 Non-productive coping: e.g. "Worry about what will happen to me." "Find a way to let off steam; for example cry, scream, drink, take drugs etc." "Shut myself off from the problem so that I can avoid it."

The three coping subscales were computed following Frydenberg and Lewis (1993) guidelines.

(iii) Interpersonal competence

The Interpersonal Competence Questionnaire – Revised (ICQ – R) (Buhrmester, 1990) (Appendix 3) is a 40-item questionnaire designed to assess five domains of interpersonal competence that are important in close relationships: initiating relationships (e.g. "How good are you at calling new people on the 'phone to set up a time to get together to do things?"), disclosing personal information ("How good are you at opening up and letting someone get to know everything about you?"), asserting displeasure with others ("How good are you at sticking up for yourself?"), providing emotional support and advice ("How good are you at helping people work through their thoughts and feelings about important decisions?") and managing interpersonal conflict ("How good are you at resolving disagreements in ways so neither person feels hurt or resentful?").

Respondents rate their self-perceptions of competence using a five-point rating scale to indicate the level of competence and comfort that each participant would have in managing each type of situation (e.g. "1 = Poor at this; would be so uncomfortable and unable to handle this situation that it would be avoided if possible" to "5 = Extremely good at this; would feel very comfortable and could handle this situation very well"). Scores are created by averaging all 40 ICQ-R items. All 40 items of the ICQ-R were used to compute the five subscales, following Buhrmester (1990) guidelines.

Buhrmester (1990) developed the ICQ-R by modifying the Interpersonal Competence Questionnaire (ICQ) (Buhrmester, Furman, Wittenberg & Reis, 1988), a measure that was originally developed to assess college students' interpersonal competence in close friendships and romantic relationships. Studies of the ICQ demonstrate that its five scales are adequately reliable, they conform to the predicted five-factor simple structure and they correlate in predictable and discriminant ways with theoretically related variables. Buhrmester (1990) made efforts to ensure that in rewording the ICQ items, the vocabulary would be appropriate for young adolescents whilst minimising alterations to the meaning of the questions.

Buhrmester (1990) reported Cronbach alpha coefficients for preadolescents (.93) and adolescents (.92). Buhrmester (poster presentation, 2002) reported on the reliability, validity and usefulness of the ICQ-R as a measure of the interpersonal competencies relevant to adolescent friendships and romantic involvement. In a six-year longitudinal study, he found that interpersonal competence had trait-like features: it was surprisingly stable across time (across two years r = .72; across four years r = .55; and across six years r = .43); self-, parent- and friend-perceptions of competence converge on a "consensus" view of the adolescent's level of interpersonal competence. Furthermore, he found that interpersonal competence was a strong correlate and predictor of success in close friendships, both in terms of number and quality of friendships.

The original ICQ measure (Buhrmester *et al.*, 1988) has previously been used to examine social functioning with adolescents (e.g. Schneider & Younger, 1996). This study will, however, use the revised version (ICQ-R) (Buhrmester, 1990) specifically tailored for adolescents.

(iv) Symptoms of depression

The Beck Depression Inventory FastScreen for Medical Patients (BDI-FastScreen) (Beck, 2000) (Appendix 4), formerly known as the Beck Depression Inventory for Primary Care (BDI-PC; Beck, Guth, Steer & Ball, 1997), is a seven-item self-report measure that screens for depression in adolescents and adults. The items were extracted from the 21-item Beck Depression Inventory-II (BDI-II; Beck, Steer & Brown, 1996). The BDI-FastScreen measures the severity of depression that corresponds to the psychological or non-somatic criteria for diagnosing major depression disorders as listed in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994).

The coefficient alphas of the BDI-FastScreen for the family practice, internal medicine, paediatric and psychiatric consultation and liaison patients were .85, .85, .88 and .86 respectively.

In terms of convergent validity of the BDI-FastScreen, 50 inpatients that were studied by Beck *et al.* (Beck, Guth *et al.*, 1997) completed the Depression subscale from the Hospital Anxiety and Depression Scale (HDS) (Zigmond & Snaith, 1983) in addition to the BDI-FastScreen. The correlation between the BDI-FastScreen (M = 5.76, SD =

4.46) and HDS (M = 8.26, SD = 4.60) total scores was .62, p< .001. Beck *et al.* (Beck, Guth *et al.*, 1997) thus concluded that the BDI-FastScreen was positively related to another commonly used scale for measuring self-reported depression in medical settings.

Further support for the convergent validity of the BDI-FastScreen was reported by Beck *et al.* (Beck, Steer *et al.*, 1997), who found that the BDI-FastScreen was positively correlated with the diagnosis of a DSM-IV mood disorder (r = .69, p < .001). Moreover, the BDI-FastScreen was more positively associated with the diagnosis of a DSM-IV mood disorder than the Beck Anxiety Inventory for Primary Care (BAI-PC; Beck, Steer *et al.*, 1997) was (r = .58, p<.001, Hotelling t (53) = 2.09, p < .05).

(v) Symptoms of anxiety

The Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown & Steer, 1988) (Appendix 5) consists of 21 descriptive statements of anxiety symptoms which are rated on a four-point scale from: "Not at all" (0 points); "Mildly; it did not bother me much" (1); "Moderately; it was very unpleasant, but I could stand it" (2); and "Severely; I could barely stand it" (3).

Osman *et al.* (Osman, Hoffman, Barrios, Kopper, Breitenstein & Hahn, 2002) found that estimates of reliability for the BAI were adequate in samples of psychiatric inpatient and high-school adolescents aged 14 to 18 years. Cronbach's alpha estimates of the BAI were .91 for clinical girls and .92 for the clinical boys. The alpha estimate for the combined clinical sample also was high (.92). In addition, satisfactory alpha estimates were obtained on the BAI for the high-school girls (.89) and boys (.88). For the combined high-school sample, the BAI alpha estimate also was satisfactory (.88). The test-retest reliability of .71 found in this study is consistent with findings reported by Beck *et al.* (1988) for a normative sub-sample of 83 adult outpatients with mixed psychiatric diagnoses.

(vi) Demographic information

The demographic questionnaire contained questions about the young person's age, gender and parental marital status (Appendix 6).

2.5 Procedure

2.5.1 Non-clinical sample

Recruitment

The researcher recruited non-clinical participants from secondary schools over a period of three months, during the school year (January 2004 - March 2004). Four schools received requests to recruit students from first to sixth year for the study. Three out of the four schools agreed to allow the recruitment of students. One school decided that it would be unable to permit recruitment of its pupils mainly because it was boarding school and staff thought it would be difficult to communicate with parents.

The participating schools offered to distribute information sheets to pupils and their parents (Appendices 7 and 8). Information sheets informed pupils, parents and guidance teachers of the nature and general purpose of the study, that data given by the young people would be kept confidential and that the young people were free to withdraw from the study at any time. Parents were given the opportunity to veto their child's participation in the study. Guidance teachers agreed to act as legal guardians and to co-sign their pupils' consent forms (Appendix 9) if they thought that the young person was able to give informed consent.

Questionnaire administration

After pupils and their parents had been given at least 24 hours to consider the project, pupils received a copy of a consent form, demographic questionnaire and questionnaire pack in their Personal and Social Education classes. Prior to administering the questionnaires, the researcher reviewed the information sheets and consent forms with the young people and answered questions. Adolescents then consented to participate by signing the consent form. These forms were co-signed by their guidance teachers if the young person was considered capable to give informed consent.

The young people completed the questionnaires individually whilst the researcher remained within a comfortable distance, to answer any questions the participants raised. The questionnaires took the young people up to 40 minutes to complete. All

participants were advised to contact guidance services within their school, or mental health resources out with their school, if they were distressed by any of the questions.

2.5.2 Clinical sample

Recruitment and Questionnaire administration

Young people attending the out patient and day patient departments of the Young People's Unit were recruited by asking clinicians to invite their clients to participate. In a similar fashion as with the non-clinical sample, information sheets were given to the young people and their parents to consider participation (Appendices 10 and 11). Informed consent was later gathered by the clinician and co-signed by either the parent or by the clinician. Once the consent forms (Appendix 12) had been completed, the questionnaire packs were given out. These were later returned, completed, in a sealed envelope, to the clinician at the client's next appointment.

2.6 Data management

Data was entered, stored and analysed using the SPSS for Windows (11.5 version) and AMOS (Analysis of Moment Structures) computer programs.

2.6.1 Screening the data

Prior to analysis, all of the main variables were examined through SPSS for accuracy of data entry, missing values and fit between their distributions and the assumptions of multivariate analysis. The variables were examined for both the non-clinical and clinical populations.

2.6.2 Missing data

Of the 190 young people who indicated their parent's marital status, just over 32.6% stated that their parents were either "separated", "divorced" or "widowed" or had "never married". Of these young people, over 21% did not complete the "father" section of the IPPA which explains the amount of missing data for father figures.

Only a few data points (5% or less) were missing from the other variables in this (large) data set so the missing data was not considered to be a problem. Mean substitution was used to complete missing data points where possible.

2.7 Overview of Analyses

Both descriptive and inferential statistics were conducted in this study.

2.7.1 Preliminary analysis

First, the associations between the main variables (i.e. attachment, coping strategies and interpersonal competence) and demographic variables (i.e. age, gender, parental cohabiting status) and clinical variables (depression and anxiety) were examined to determine the need to include control variables in the main analyses testing mediation.

2.7.2 Main analysis

Differences between the clinical and non-clinical populations on attachment, coping styles and interpersonal competence were then tested using t-tests for independent samples.

A variety of analyses were conducted to explore the relations among attachments to mothers, fathers and close friends, with demographic and clinical variables, coping styles and interpersonal competence within the non-clinical sample. Initially, Pearson's correlations were conducted to look at bivariate associations between variables. Step-wise multiple regression analyses were then used to assess the relative and incremental contribution of independent variables to explaining the variance in the dependent variables.

Partial correlations and step-wise multiple regressions were used to test the main hypothesis that coping styles partly mediate the association between attachment and interpersonal competence (mediational analyses were considered using Baron and Kenny's (1986) criteria for establishing a mediated relation). The hypothesized path diagram was tested for goodness of fit with the observed data using chi-square analysis (AMOS program).

3 Results

3.1 Total sample

A total of 200 young people participated in the project, of which 19 were recruited from the Young People's Unit[4] (YPU) (clinical sample) and 181 were recruited from secondary schools in Edinburgh (non-clinical sample). The age range for the clinical sample was 14 to 18 whilst the non-clinical sample ranged from 11 to 18 years. In the total sample, there was an equal split between the number of male and female participants (53.5% female, 46.5% male) and 64% of the young people reported that their parents were cohabiting[5] at the time of the assessment.

3.2 Demographics of the two groups

(i) Age

Because the age of participants in the clinical group ranged from 14 to 18, whereas the non-clinical group ranged from 11 to 18, when making comparisons between the two groups, only participants 14 years of age or older were included. This resulted in a sample of 106 for the non-clinical group. After matching the age ranges of the two groups, an independent samples t-test revealed that there was no significant difference between the mean ages of the two groups ($t(123)=1.77$, N.S.).

(ii) Gender

Forty-nine percent of the non-clinical group were female (N=52) compared to 73% in the clinical group (N=14). The distribution of gender in the two groups was not found to be significantly different when analyzed using a chi-square test ($\chi^2(1)=3.92$, N.S).

(iii) Parental cohabiting status

Sixty-seven percent of the non-clinical group reported that their parents were cohabiting (N=70) compared to 44% of the clinical sample (N=8). The distribution of parental cohabiting status in the two groups was not found to be significantly different when analyzed using a chi-square test ($\chi^2(1)=3.7$, N.S).

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[4] Recruiting the clinical sample proved to be more difficult than for the non-clinical sample. Despite clinicians' willingness to help, few people were recruited. This may have been because of clinicians' heavy workloads and their concerns about asking vulnerable young people to participate in research.

[5] For analyses, parental marital status was converted into a dichotomous variable to compare co-habiting parents (married or cohabiting partners) with parents who were not cohabiting (separated, divorced or never married).

3.3 Detecting outliers and collinearity

Box plots and scatter plots were used to check for outliers and collinearity. No extreme outliers or collinearity were detected.

3.4 Assumptions and transformations

A check on the skewness and kurtosis for all the variables for the both the non-clinical and clinical data sets was done through SPSS EXPLORE. See appendix 13 for details of the skewness, kurtosis, Kolmogorov-Smirnov tests and transformations.

3.5 Multiple testing and the Bonferroni correction

In order to reduce the likelihood of making a Type 1 error through multiple testing, Bonferroni corrections were calculated when no directional hypotheses were made.

3.6 Attachment to mother and father figures

3.6.1 Non-clinical sample

Pearson's correlations were conducted between the Inventory of Parent and Peer Attachment (IPPA) subscales for parental figures to examine the relations between them (Tables 3 and 4). For both parental figures, IPPA subscales inter-correlated[6].

		Communication – mother	Alienation – mother
Trust – mother	Pearson Correlation	.79(**)	.64(**)
	Sig. (1-tailed)	.000	.000
	N	179	179
Communication – mother	Pearson Correlation		.58(**)
	Sig. (1-tailed)		.000
	N		179

** Correlation is significant at the 0.01 level (1-tailed). After Bonferroni correction p is significant at < 0.02

Table 3 Pearson's correlations between the Inventory of Parent and Peer Attachment subscales for attachment to mother (non-clinical population)

[6] N.B. As previously noted, a high score on the alienation subscale indicates *absence* of alienation towards attachment figures.

		Communication – father	Alienation – father
Trust – father	Pearson Correlation	.82(**)	.63(**)
	Sig. (1-tailed)	.000	.000
	N	168	168
Communication – father	Pearson Correlation		.65(**)
	Sig. (1-tailed)		.000
	N		168

** Correlation is significant at the 0.01 level (1-tailed). After Bonferroni correction p is significant at < 0.02

Table 4 Pearson's correlations between the Inventory of Parent and Peer Attachment subscales for attachment to father (non-clinical population)

3.6.2 Clinical sample

As with the non-clinical sample, Pearson's correlations were conducted between the Inventory of Parent and Peer Attachment (IPPA) subscales for parental figures to explore relations between them (Table 5 and 6). For both of the attachment figures, IPPA subscales inter-correlated.

		Communication – mother	Alienation – mother
Trust – mother	Pearson Correlation	.92(**)	.76(**)
	Sig. (1-tailed)	.000	.000
	N	18	18
Communication – mother	Pearson Correlation		.74(**)
	Sig. (1-tailed)		.000
	N		18

** Correlation is significant at the 0.01 level (1-tailed). After Bonferroni correction p is significant at < 0.02

Table 5 Pearson's correlations between the Inventory of Parent and Peer Attachment subscales for attachment to mother (clinical population)

		Communication – father	Alienation – father
Trust – father	Pearson Correlation	.88(**)	.85(**)
	Sig. (1-tailed)	.000	.000
	N	18	18
Communication – father	Pearson Correlation		.85(**)
	Sig. (1-tailed)		.000
	N		18

** Correlation is significant at the 0.01 level (1-tailed). After Bonferroni correction p is significant at < 0.02

Table 6 Pearson's correlations between the Inventory of Parent and Peer Attachment subscales for attachment to father (clinical population)

For both the non-clinical and clinical samples, IPPA subscales scores for each attachment figure were highly significantly related. A decision was made, on the basis of the strong correlations[7] between the three subscales, and in an effort to reduce the likelihood of a type 1 error, to collapse the subscales to a total score for attachment to each figure. Subsequent analyses are based on these total attachment scores.

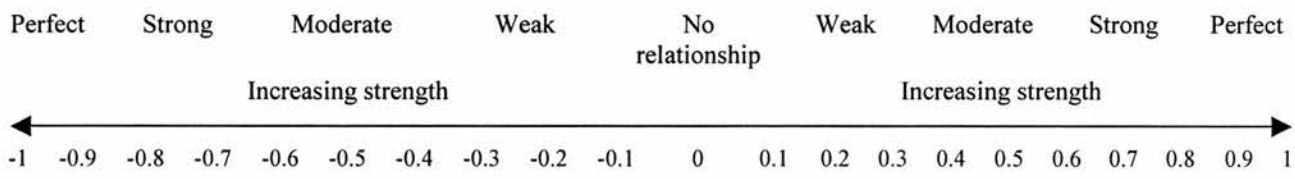
3.7 Pearson's correlation between the two dependent variables

The attachment to friend subscale of the IPPA and the Interpersonal Competence Questionnaire – Revised (ICQ-R), two of the dependent variables in this study, were moderately, and highly significantly, related in both the non-clinical ($r(178)=.46$, $p<0.000$) and clinical samples ($r(19)=.69$, $p<0.001$). Therefore, in order to reduce the likelihood of a type 1 error, the ICQ-R was used as the sole dependent variable. The ICQ-R was chosen rather than the attachment to friend subscale to reduce the likelihood of an inflated alpha which might be more likely to occur when using subscales within questionnaires for analysis rather than between questionnaires.

3.8 Pearson's correlations between subscale scores on the Interpersonal Competence Questionnaire – Revised (ICQ-R)

As can be seen in Tables 7 and 8 below, for both the non-clinical and clinical samples, there were moderate, and highly significant, correlations between subscale scores on the ICQ-R. On the basis of the correlations between subscales, and in an effort to reduce the likelihood of a type 1 error, the subscales were collapsed to a total score for interpersonal competence. Subsequent analyses is based on this total interpersonal competence score.

[7] The interpretation of the correlation coefficient scale was taken from Coolican (1994: 296).



Non-clinical sample

		Emotional support & advice	Asserting displeasure with others	Disclosing personal information	Managing interpersonal conflict
Initiating relationships	Pearson Correlation	.54(**)	.51(**)	.55(**)	.43(**)
	Sig. (2-tailed)	.000	.000	.000	.000
	N	178	178	178	178
Emotional support & advice	Pearson Correlation		.44(**)	.57(**)	.58(**)
	Sig. (2-tailed)		.000	.000	.000
	N		178	178	178
Asserting displeasure with others	Pearson Correlation			.41(**)	.35(**)
	Sig. (2-tailed)			.000	.000
	N			178	178
Disclosing personal information	Pearson Correlation				.46(**)
	Sig. (2-tailed)				.000
	N				178

** Correlation is significant at the 0.01 level (2-tailed).

Table 7 Pearson's correlations between subscale scores on the Interpersonal Competence Questionnaire – Revised (ICQ-R) (non-clinical population)

Clinical sample

		Emotional support & advice	Asserting displeasure with others	Disclosing personal information	Managing interpersonal conflict
Initiating relationships	Pearson Correlation	.64(**)	.54(**)	.56(**)	.44(*)
	Sig. (2-tailed)	.002	.009	.007	.031
	N	19	19	19	19
Emotional support & advice	Pearson Correlation		.47(**)	.65(**)	.53(**)
	Sig. (2-tailed)		.02	.001	.01
	N		19	19	19
Asserting displeasure with others	Pearson Correlation			.71(**)	.49(**)
	Sig. (2-tailed)			.000	.016
	N			19	19
Disclosing personal information	Pearson Correlation				.68(**)
	Sig. (2-tailed)				.001
	N				19

** Correlation is significant at the 0.01 level (2-tailed).

Table 8 Pearson's correlations between subscale scores on the Interpersonal Competence Questionnaire – Revised (ICQ-R) (clinical population)

3.9 Descriptive and inferential statistics for the clinical and non-clinical groups

Descriptive statistics were run for the main variables (IPPA, Adolescent Coping Scale (ACS), ICQ-R, BDI-FastScreen and BAI) for the non-clinical sample and clinical sample (see Table 9 below). Independent samples t-tests were conducted to test for significant differences between the clinical and non-clinical groups in relation to the variables used in the study (see Table 9 below).

		Non-clinical			Clinical			CLINICAL vs. NON-CLINICAL		
		N	Mean	Std. Deviation	N	Mean	Std. Deviation	t	df	Asymp. Sig. (2-tailed)
IPPA	Attachment to mother	105	93.50	18.93	18	83.78	24.18	1.64	121	N.S.
	Attachment to father	99	86.85	20.06	18	69.17	28.42	3.21	115	.002
ACS	Solve the problem	105	62.69	10.91	19	54.16	11.16	3.12	122	.002
	Reference to others	105	49.81	12.44	19	52.11	13.05	.74	122	N.S.
	Non-productive coping	105	51.16	10.72	19	59.37	15.19	2.87	122	.005
Interpersonal competence		106	16.42	2.56	19	13.72	3.11	4.1	123	.000
BDI-FastScreen		100	3.97	3.66	18	10.61	6.84	4.03	116	.000
BAI		99	12.25	10.09	19	27.68	14.48	4.96	116	.000

N.S. = not significant

Table 9 Descriptive statistics for all the main variables and independent t-tests comparing the clinical and non-clinical populations

There was no significant difference between the clinical and non-clinical groups in terms of attachment to mother but the clinical group rated their attachment to fathers as significantly more negatively than the non-clinical group. The clinical group reported to use solve the problem style of coping significantly less, and non-productive coping significantly more, than the non-clinical group. There was no significant difference between the two groups in the use of reference to others style of coping. The clinical group rated themselves significantly lower on interpersonal competence than the non-clinical group. As expected, young people at the YPU scored significantly higher on both the BDI-FastScreen and the BAI.

No further analyses were carried out with the clinical sample because the main focus of this research was to examine a non-clinical population. The clinical sample was intended to be an interesting adjunct to the study, to look for broad differences between the two groups. The remainder of the analyses were carried out exclusively for the non-clinical sample.

Several preliminary analyses were conducted to determine associations between the demographic variables (age, parents' cohabiting status and gender) and the primary constructs of interest.

3.10 Age and the main variables

Pearson's correlations, two-tailed, were conducted to examine relations between the young person's age and the main variables: attachment to mother and father, coping styles, interpersonal competence, depression and anxiety (see Tables 10-11).

3.10.1 Age and attachment to mother and father

	Females			Males		
	Pearson Correlation with AGE	Sig. (2-tailed)	N	Pearson Correlation with AGE	Sig. (2-tailed)	N
Attachment to mother	-.18	N.S.	93	-.35**	.001	86
Attachment to father	-.25*	.012	86	-.25*	.013	82

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

N.S. = not significant

After Bonferroni correction, p is significant if < 0.013

Table 10 Bivariate associations between age and attachment for the non-clinical sample split by gender

For females, there was no significant association between attachment to mothers and age but a significant negative association between attachment to fathers and age. For males, there was a moderate, and highly significant, negative association between attachment to mother and age and a weak, but significant, association between attachment to father and age (see Table 10 above).

In other words, the older the female participant, the poorer her reported attachment to her father but not mother. The older the male participant, the poorer his reported attachment to both his mother and father.

3.10.2 Age and coping styles, interpersonal competence, depression and anxiety

		AGE		
		N	Pearson Correlation	Sig. (2-tailed)
ACS	Solve the problem	180	-.1	N.S.
	Reference to others	180	.05	N.S.
	Non-productive coping	180	.12	N.S.
Interpersonal competence		178	.06	N.S.
BDI-FastScreen		171	.19	N.S.
BAI		169	.08	N.S.

N.S. = not significant. Bonferroni correction p is significant if < 0.008

Table 11 Bivariate associations between age, coping styles, interpersonal competence, BDI-FastScreen and BAI.

Age was not significantly associated with responses on the adolescent coping scale, interpersonal competence questionnaire - revised, BDI-FastScreen or BAI (see Table 11 above).

3.11 Parental cohabiting status and the main variables

Independent t-tests were conducted to test for differences between young people grouped on the basis of their parents' cohabiting status[8] in relation to the variables used in the study (see Table 12 below).

Of the 172 young people who indicated their parent's marital status, just over 28.7% stated that their parents were either separated, divorced or had never married. Of these young people, over 23.1% did not complete the attachment to father section of the IPPA.

[8] For these analyses, as before, parental marital status was converted into a dichotomous variable to compare co-habiting parents (married or cohabiting partners) (n=120) with parents who were not cohabiting (separated, divorced or never married) (n=52).

		Parents' cohabiting status	N	Mean	Std. Deviation	t	df	Sig. (two-tailed)
IPPA	Attachment to mother	Not-cohabiting	50	94.90	18.99	1.08	168	N.S.
		Cohabiting	120	97.59	18.06			
	Attachment to father	Not-cohabiting	40	83.35	23.93	2.47	158	N.S.
		Cohabiting	120	93.54	18.12			
ACS	Solve the problem	Not-cohabiting	52	61.56	9.83	1.62	169	N.S.
		Cohabiting	119	64.51	11.45			
	Reference to others	Not-cohabiting	52	48.46	14.02	.01	169	N.S.
		Cohabiting	119	48.45	13.19			
	Non-productive coping	Not-cohabiting	52	53.31	10.33	2.4	169	N.S.
		Cohabiting	119	48.91	11.32			
Interpersonal competence		Not-cohabiting	52	16.48	2.34	.21	167	N.S.
		Cohabiting	117	16.39	2.69			
BDI-FastScreen		Not-cohabiting	51	3.69	3.12	1.17	161	N.S.
		Cohabiting	112	3.37	3.58			
BAI		Not-cohabiting	51	11.57	10.36	.03	160	N.S.
		Cohabiting	111	11.35	9.78			

N.S. = not significant

After Bonferroni correction p is significant at < 0.006

Table 12 Independent samples t-tests to explore differences between the cohabiting parents and single parents in relation to the variables used in the study (two-tailed).

In terms of the main variables there was no significant difference between young people on the basis of parental cohabiting status. Because there were no significant associations between parental cohabiting status and any of the main variables, this demographic variable was not considered any further.

3.12 Gender and the main variables

		Gender	N	Mean	Std. Deviation	t	df	Sig. (two-tailed)
IPPA	Attachment to mother	Female	93	95.05	21.13	.7	177	N.S.
		Male	86	98.43	14.48			
	Attachment to father	Female	86	88.14	23.53	1.5	166	N.S.
		Male	82	92.91	17.2			
ACS	Solve the problem	Female	93	61.68	11.39	2.34	178	N.S.
		Male	87	65.48	10.37			
	Reference to others	Female	93	51.34	13.83	2.95	178	.004**
		Male	87	45.57	12.33			
	Non-productive coping	Female	93	52.54	11.53	2.79	178	N.S.
		Male	87	47.98	10.32			
Interpersonal competence		Female	91	16.83	2.64	2.67	176	N.S.
		Male	87	15.79	2.56			
BDI-FastScreen		Female	90	3.99	3.61	1.97	169	N.S.
		Male	81	2.94	3.01			
BAI		Female	86	12.92	10.15	1.74	167	N.S.
		Male	83	10.07	9.41			

N.S. = not significant

After Bonferroni correction p is significant at < 0.006

Table 13 Independent Samples T-Tests to explore differences between females and males in relation to the variables used in the study.

There was no significant gender difference in terms of attachment to mother or father or coping styles, except for reference to others (see Table 13). Females rated themselves as using reference to others style of coping significantly more often than males. There was no significant gender difference in overall interpersonal competence or symptoms of depression or anxiety (see Table 13 above). As hypothesized, however, females rated themselves significantly higher than males did on two subscales of the Interpersonal Competence Questionnaire – Revised: emotional support and self-disclosure (see Table 14 below).

Interpersonal Competence Questionnaire – Revised	Gender	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Initiating relationships	Female	91	3.26	.81	1.15	176	N.S.
	Male	87	3.13	.70			
Emotional support & advice	Female	91	3.73	.60	4.08	176	.000**
	Male	87	3.37	.58			
Asserting displeasure with others	Female	91	3.4	.7	.36	176	N.S.
	Male	87	3.36	.58			
Disclosing personal information	Female	91	3.27	.76	3.93	176	.000**
	Male	87	2.82	.77			
Managing interpersonal conflict	Female	91	3.17	.68	.64	176	N.S.
	Male	87	3.11	.60			

N.S. = not significant

Table 14 Independent samples t-tests to explore gender differences in relation to subscales of the Interpersonal Competence Questionnaire – Revised.

3.13 Association between mood, anxiety and the main variables

		BDI-FastScreen			BAI		
		N	Pearson Correlation	Sig. (2-tailed)	N	Pearson Correlation	Sig. (2-tailed)
IPPA	Attachment to mother	169	-.33**	.000	167	-.33**	.000
	Attachment to father	158	-.43**	.000	156	-.28**	.000
ACS	Solve the problem	170	-.37**	.000	168	-.17	N.S.
	Reference to others	170	.1	N.S.	168	.004	N.S.
	Non-productive coping	170	.5**	.000	168	.33**	.000
Interpersonal competence		169	-.34**	.000	167	-.25**	.001

N.S. = not significant

Bonferroni correction p is significant if < 0.004

Table 15 Bivariate associations between mood, anxiety and the main variables.

Those individuals who rated themselves as more depressed and anxious tended to rate their attachment to their mothers and fathers as lower; their use of non-productive coping as higher and their interpersonal competence as lower (see Table 15). The more depressed the individual, the less likely they were to use solve the problem style of coping. Level of anxiety was not associated with solve the problem style of coping. Finally, neither level of depression nor anxiety were associated with reported use of reference to others style of coping.

Next, this study addressed the hypothesized relation between attachment to parents and interpersonal competence.

3.14 Analyses testing the main hypotheses

3.14.1 Attachment to parents and interpersonal competence

H1: The first hypothesis of this study predicted that adolescents with secure representations of parents would score higher in terms of interpersonal competence than those with less secure representations[9].

Pearson's correlations highlighted weak, though highly significant, associations between both attachment to mother and father and interpersonal competence (see Table 16 below).

		Interpersonal Competence		
		N	Pearson Correlation	Sig. (1-tailed)
IPPA	Attachment to mother	176	.28(**)	.000
	Attachment to father	165	.28(**)	.000
	Attachment to parents	177	.3(**)	.000

** Correlation is significant at the 0.01 level (1-tailed).

Table 16 Bivariate associations between attachment to mother and father figures (IPPA) and scores on the Interpersonal Competence Questionnaire – Revised.

Partial correlations were used to examine the contribution that attachment to parents made to interpersonal competence after controlling for depression and anxiety[10]. Because ratings of overall attachment to mothers and fathers were highly significantly, related ($r(167)=.5$, $p<0.001$), a combined attachment to parents score was used for the partial correlation analysis. Where young people had only rated attachment to one parent, this single score was used.

Even after controlling for depression and anxiety, there was a significant, albeit weak, association between attachment to mother and interpersonal competence ($r(157)=.23$, $p<0.002$). Similarly, after controlling for depression and anxiety, there was still a significant, albeit weak, association between attachment to father and interpersonal competence ($r(146)=.18$, $p<0.017$).

In summary, adolescents who rated their attachment with parents as more secure also rated themselves as more interpersonally competent, even after controlling for depression and anxiety.

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[9]The correlational analyses that follow cannot indicate anything about a possible direction of influence between variables.

[10] Previously (section 3.13), these clinical variables had been found to be related to interpersonal competence.

3.14.2 Attachment to parents and coping styles

H2: The second hypothesis was that greater security of attachment to parents would be associated with higher reported use of adaptive coping styles, such as problem-solving and reference to others, and less use of non-productive coping styles.

Pearson's correlations revealed that individuals who reported higher attachment to their mothers and fathers also reported greater use of problem solving styles (see Table 17 below). There was some association between attachment to mother and reference to others, such that as attachment went up so did use of reference to others, but there was no association between attachment to father and this style of coping. Finally, there was a negative association between attachment to parents and non-productive coping, such that those young people who reported higher attachment to parents reported lower use of non-productive style of coping.

IPPA	Solve the problem			Reference to others			Non-productive coping		
	N	Pearson Correlation	Sig. (1-tailed)	N	Pearson Correlation	Sig. (1-tailed)	N	Pearson Correlation	Sig. (1-tailed)
Attachment to mother	178	.4(**)	.000	178	.13(*)	.031	178	-.32(**)	.000
Attachment to father	167	.33(**)	.000	167	.08	N.S.	167	-.42(**)	.000
Attachment to parents	179	.41(**)	.000	179	.13(*)	.039	179	-.43(**)	.000

* Correlation is significant at the 0.05 level (1-tailed). ** Correlation is significant at the 0.01 level (1-tailed).

N.S. = not significant

Table 17 Bivariate associations between attachment to parents and coping styles

Because previous analysis (see section 3.12) had highlighted a gender difference in use of reference to others style of coping, Pearson's correlations were used to examine gender differences in association with this style of coping and attachment to mother and father.

	IPPA	Reference to others		
		N	Pearson Correlation	Sig. (1-tailed)
Females	Attachment to mother	93	.16	N.S.
	Attachment to father	86	.14	N.S.
Males	Attachment to mother	85	.12	N.S.
	Attachment to father	81	.06	N.S.

N.S. = not significant.

Bonferroni correction p is significant if < 0.01

Table 18 Bivariate associations between attachment to mothers and fathers and coping styles split by gender

When the sample was split by gender, there was no significant association between attachment to mother or father and reference to others for either females or males (Table 18). Reference to others style of coping could not, therefore, be a mediating factor between attachment to parents and interpersonal competence.

Partial correlations were used to see if the relationships between attachment to parents and solve the problem and non-productive styles of coping were still significant after controlling for depression and anxiety.

After controlling for depression, there was still a moderate, and highly significant, association between attachment to mother and solve the problem style of coping ($r(165)=.33$, $p<0.000$) and between attachment to father and solve the problem style of coping ($r(154)=.22$, $p<0.003$).

After controlling for depression and anxiety, there was still a weak, though significant, negative association between attachment to mother and non-productive style of coping ($r(158)=-.17$, $p<0.018$) and between attachment to father and non-productive style of coping ($r(147)=-.25$, $p<0.001$).

In summary, adolescents who rated their attachment with parents as more secure also rated themselves as using solve the problem style of coping more, and non-productive style of coping less, even after controlling for depression and anxiety.

3.14.3 Coping styles and interpersonal competence

H3: The third hypothesis was that coping styles would be associated with interpersonal competence.

Solve the problem style of coping was moderately, and highly significantly, related to interpersonal competence (see Table 19 below). Reference to others was weakly, though significantly, related to interpersonal competence (but was not related to attachment to mother or father and therefore could not be a mediating factor). Non-productive coping was not significantly related to interpersonal competence.

ACS	Interpersonal competence		
	N	Pearson Correlation	Sig. (1-tailed)
Solve the problem	177	.46(**)	.000
Reference to others	177	.17(*)	.013
Non-productive coping	177	-.08	N.S.

* Correlation is significant at the 0.05 level (1-tailed). ** Correlation is significant at the 0.01 level (1-tailed).
N.S. = not significant

Table 19 Bivariate associations between coping styles and interpersonal competence

Partial correlation analysis revealed that, even after controlling for depression and anxiety, there still was a moderate, and highly significant, association between solve the problem style of coping and interpersonal competence ($r(158)=.38$, $p<0.000$).

3.15 Summary of findings regarding the non-clinical sample

H1: Attachment to parents and interpersonal competence

To summarize, scores on attachment to mother and father were weakly, though highly significantly, correlated with interpersonal competence even after controlling for depression and anxiety. The first link, therefore, between attachment to parents and interpersonal competence was supported[11].

H2: Attachment to parents and coping styles

Attachment to parents was related to solve the problem and non-productive styles of coping over and above the clinical variables. Attachment to parents was not related to reference to others style of coping. The second link, between attachment to parents and two out of the three coping styles, was therefore supported.

H3: Coping styles and interpersonal competence

Solve the problem style of coping was associated with interpersonal competence, over and above the clinical variables. Reference to others was not examined because it was found not to be associated with attachment to parents in previous analysis. Non-productive coping was not associated with interpersonal competence.

H4: Main hypothesis – mediation analysis

Finally, the main hypothesis, that the association between attachment to parents (both mother and father) and interpersonal competence would be partly mediated by coping styles was tested.

Solve the problem style of coping was tested as a possible mediating factor between attachment to parents and interpersonal competence. A partial correlation controlling for solve the problem style of coping reduced the association between attachment to mother and interpersonal competence from $r(176)=.28$, $p<0.01$ (one-tailed) to a weaker, though still significant, correlation $r(160)=.14$, $p<0.05$ (one-tailed). The association between attachment to father and interpersonal competence (originally $r(165)=.28$, $p<0.01$) (one-tailed) was reduced, though still significant ($r(160)=.15$, $p < 0.05$) (one-tailed) after controlling for solve the problem style of coping.

[11] Following Baron & Kenny's (1986) criteria for establishing a mediated relationship.

In order to assess whether the reduction in the correlation between attachment to parents and interpersonal competence was significant, stepwise multiple regressions were used. The first multiple regression was run with attachment to mother and solve the problem style of coping as independent variables and interpersonal competence as the dependent variable (Table 20).

Model	Standardized Beta coefficient	Adjusted R Square	Change Statistics		
			R Square Change	F Change	Sig. F Change
Solve the problem	.46	.21	.21	46.74	.000

Table 20 Summary statistics for stepwise multiple regression

Dependent Variable: Interpersonal competence

Independent Variables: Solve the problem style of coping and attachment to mother.

Attachment to mother was excluded by the stepwise multiple regression. This suggests that attachment to mother did not help to explain the variance in interpersonal competence over and above solve the problem style of coping.

A second multiple regression was used, with attachment to father and solve the problem style of coping as the independent variables and interpersonal competence as the dependent variable (Table 21).

Model	Standardized Beta coefficient	Adjusted R Square	Change Statistics		
			R Square Change	F Change	Sig. F Change
Solve the problem	.45	.2	.21	41.71	.000

Table 21 Summary statistics for stepwise multiple regression

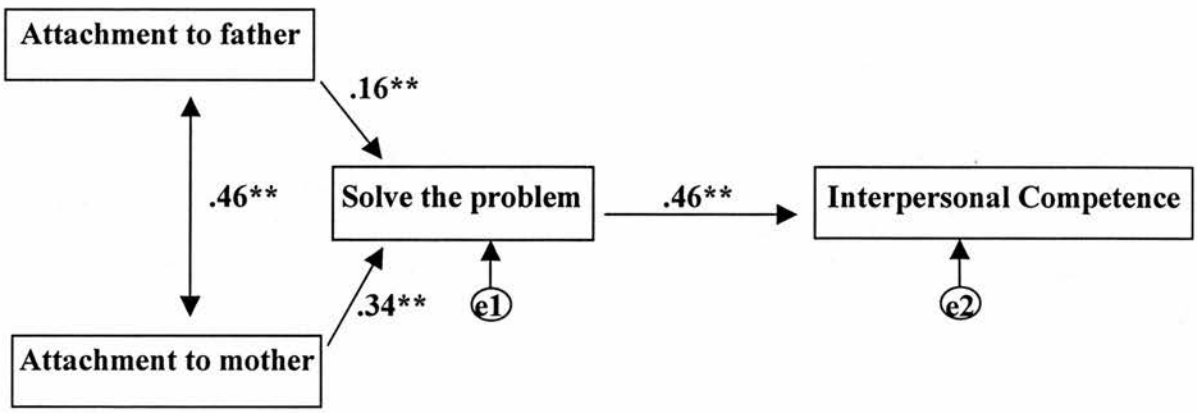
Dependent Variable: Interpersonal competence

Independent Variables: Solve the problem style of coping and attachment to father

Attachment to father was excluded by the stepwise multiple regression. This suggests that attachment to father did not help to explain the variance in interpersonal competence over and above solve the problem style of coping.

The goodness of fit of the hypothesized mediation model was tested using AMOS program for structural equation modeling. As illustrated in Figure 1, the path diagram consisted of 4 endogenous and 2 exogenous variables. This figure displays the model and the obtained parameter estimates (standardized).

Overall, the model fitted the data set well (χ^2 (2, N = 181) = 3.79, N.S). It is likely that the large sample size means that the fit of the model to the data is not simply a result of inadequate power. It is important to note, however, that equivalent goodness of fit estimates would be obtained by reversing the direction of the so-called causal paths.



Key

Near single-headed arrows - Standardized regression weights

Near double-headed arrows – Correlations

** p< 0.01

Figure 1 Path diagram to show the association between attachment to mother and father to solve the problem style of coping and interpersonal competence.

Note: N =181. Chi-square (2) =3.79, N.S.

4 Discussion

The overall aim of this study was to add to the research literature investigating the origins of individual differences in young people's interpersonal competence, with a focus on the influence of emotional security in families. Specifically, the study aimed to investigate whether behavioural coping styles help to explain the concurrent associations between parent-adolescent relationships and young people's interpersonal competence within the peer context. The study also aimed to examine differences between a clinical and non-clinical population of adolescents in terms of attachment, coping styles and interpersonal competence.

4.1 Inter-correlations between subscales of the Inventory of Parent Attachment

The present study, contrary to Schneider and Younger's (1996) findings, but in line with Armsden and Greenberg's (1987) study, found significant correlations between subscales of the Inventory of Parent Attachment (IPA) (Armsden & Greenberg, 1987). As mentioned in the introduction, Schneider and Younger (1996) did not find significant correlations between alienation scores and scores for communication with and trust of the same parent. The findings in this study, that such subscales are highly significantly correlated, may be the result of having a sufficient power, compared to Schneider and Younger's (1996) study.

4.2 Exclusion of peer attachment subscale

Before discussing the main findings of this study, it is important to discuss the rationale for excluding one of the two dependent variables from the main analysis. During preliminary analyses, the researcher found that the two dependent variables, the attachment to friend subscale of the IPPA and the Interpersonal Competence Questionnaire – Revised – were highly significantly correlated. In order to reduce the chance of committing a Type I error, through multiple analyses and to reduce the proportion of shared variance, it was decided that one of the two scales would be excluded.

The clinical implications were considered when deciding between the two measures. The researcher was specifically interested in factors which influence young people's interpersonal competence, because this has been found to be a predictor of mental health and is, perhaps, more amenable to change through clinical intervention than attachment to peers. Therefore it was thought that the social functioning measure (i.e. the Interpersonal

Competence Questionnaire – Revised) was the more appropriate outcome measure than the subscale measure of attachment to peers.

Although it seemed justified to select one of the two dependent variables it is important to consider why these two variables might have correlated so highly. One possibility is that the two measures are tapping into the same underlying construct and therefore the high correlations represent convergent validity between the measures. For example, the two measures could be measuring a general ability to relate and engage with others which requires all the subscale skills e.g. ability to trust, communicate, disclose personal information and resolve conflicts. The other side of this is that the measures may lack discrete validity.

4.3 Clinical vs. non-clinical population

4.3.1 Attachment to parents

Given the findings in previous research (e.g. Rosenstein & Horowitz, 1996; Scott Brown & Wright, 2003), that clinical groups of adolescents display significantly more ambivalent and avoidant attachment patterns, it was expected in this study that the clinical group of young people would report poorer attachment to both mothers and fathers in terms of trust, communication and alienation. This hypothesis was partially supported as the clinical group reported significantly poorer attachment to fathers, but no difference in terms of attachment to mothers, when compared to the non-clinical population.

Referring to the child literature, MacDonald (1987) and MacDonald and Parke (1984) found that the role of fathers in terms of directiveness and affect regulation in preparing children for other relationships was especially important relative to mothers. Furthermore, in a study of familial interaction, Patterson and Dishion (1988) found that rates of irritable coercive behaviours were significantly higher for fathers than for mothers, suggesting that fathers make a strong contribution to the child's problem behaviour, which, in turn is likely to influence interactions with others. The finding in this study, that attachment to fathers was significantly poorer in the clinical group, may be reflective of the importance of the father-adolescent relationship in socio-emotional development.

The observed lack of difference between the two groups for attachment to mother may be an artefact of an insufficient sample size. In order to find a large effect size when testing for mean differences between two populations, a sample of at least twenty-six participants is required (Cohen, 1992). Because only nineteen participants were recruited in this study, the power is not sufficient to conclude that there is no significant difference between the two groups in terms of attachment to mother. The association between mother- and father-adolescent attachment and mental health remains under-investigated, which could be an area for future research.

4.3.2 Coping styles

In line with previous research (e.g. Kobak & Ferenz-Gilles, 1995; Meerum-Terwogt, 1990; Meerum-Terwogt *et al.*, 1990; Taylor & Harris, 1984), the clinical group had significantly poorer styles of coping than the non-clinical group. Specifically, the clinical group scored higher on non-productive coping and lower on solve the problem style of coping. This finding also fits with what are commonly observed, and targeted through behavioural interventions, in clinical practice.

Attachment theory proposes that children who receive responsive and sensitive caregiving learn that distress can be alleviated by seeking support from others and therefore lead to adaptive help-seeking behaviour later in life at stressful times. Given the finding that the clinical group had significantly poorer attachment relationships with their fathers, it was somewhat surprising that there was no difference between the two groups in terms of reference to others style of coping. This could be because the clinical group was defined by those who had, by some means, accessed mental health resources and therefore, by definition, were more proficient at seeking help than young people with mental health problems who have not yet presented to such services. However, even in the non-clinical sample, depression and anxiety were not found to be associated with this style of coping. In any case, the number of people recruited to the clinical sample is not quite sufficient to be able to draw firm conclusions in situations such as this where no differences were found.

4.3.3 Interpersonal competence

As expected, the clinical group rated themselves lower in terms of interpersonal competence compared to the young people in the non-clinical population. This association between

interpersonal competence and mental health is in line with earlier work (e.g. Buhrmester, 1990; Hartup, 1983; Parker & Asher, 1987; Coie, Dodge & Kupersmidt, 1990; Parker, Rubin, Price & Desrosier, 1995). The strong link between interpersonal competence and mental health in adolescence may reflect some of the developmental tasks of this life stage. In particular, this transitional stage demands of the young person to separate from his or her family and to define him or herself in relation to others. Social skills and the ability to establish intimacy and a sense of belonging out with the family are vital to the young person's sense of self-worth. Difficulties with such skills and relationships are likely to be risk factors for the emergence of mental health problems that, in turn, are likely to exacerbate previous interpersonal difficulties. Clinically, it is frequently observed that young people in mental health settings present with poor peer relationships and limited social support and intimacy in relationships.

As previously mentioned, the clinical group was intended to be an interesting addition to the study, to highlight broad differences in the main variables of interest compared to the non-clinical group. Given the significant differences between the two groups on several of the variables, it would be interesting to extend the research to investigate the links between attachment experiences, coping styles and interpersonal competence. Such data collection and analyses were beyond the scope of this thesis but would be an area for further research.

Before discussing the results of the main hypotheses in relation to the non-clinical sample, I will briefly discuss the associations between age and gender and the main variables (attachment to parents, coping styles and interpersonal competence) (for the non-clinical sample).

4.4 Age

Although current models highlight the importance of attachment to parental figures during the adolescent years as a secure base from which adolescents can negotiate the developmental tasks of separation and individuation (e.g. Larson, Richards, Moneta, Holmbeck & Duckett, 1996; Steinberg, 1990), this study found a negative association between age and attachment to parents except between girls and their mothers. This finding fits with Papini *et al.'s* (1991) results that self-reported attachment security to parents decreases with pubertal maturity. They explain their findings by referring to the emotional-

distancing hypothesis that perceived attachment to parents diminishes over the adolescent period. The assessment tool used in this study may be measuring the separation-individuation process rather than the secure base phenomenon. In any case, this finding may highlight the tensions that adolescents face in their need to use parents as a secure base from which to explore whilst attempting to separate and individuate from these very attachment figures.

4.5 Gender

As expected from previous studies (e.g. Armsden & Greenberg, 1987; Kenny, Lomax, Brabeck & Fife, 1998; Kenny *et al.*, 1993; Rice *et al.*, 1995), there were no significant gender differences in attachment to mothers and fathers. There was, however, a gender difference in terms of use of reference to others style of coping. Females reported using reference to others style of coping significantly more frequently than males. Previous research evidence seemed to be mixed regarding gender differences and coping styles in adolescence, with some research evidence to suggest that females, more than males, rely more on social supports as a coping strategy (e.g. Frydenberg & Lewis, 1999; Stark, Spirito, Williams & Guevremont, 1989) whilst other evidence suggesting no significant gender differences regarding styles of coping (e.g. DeMello & Toni, 1999; Mullis & Chapman, 2000; Neill & Proeve, 2000; Plucker, 1998).

In support of previous research (e.g. Buhrmester, 1996), females rated themselves as significantly more competent at providing emotional support and disclosing personal information than males. As discussed earlier, Maccoby (1990) proposes that such gender differences arise from same-sex peer relations that shape the development of gender differences in social-interaction styles.

By adulthood, it is likely that such gender differences in self-disclosure and provision of emotional support will be even more pronounced, because of the opportunity females have to develop such skills. It may be at this stage that gender differences in coping styles are more consistently observed, with females seeking more emotional support than males. Indeed, Day and Livingstone (2003) found that amongst undergraduate students, females indicated that they used social supports to a greater extent than males. Similarly, Reevy and

Maslach (2001) found that amongst 20-66 year olds, femininity was associated with seeking and receiving emotional support.

4.6 Link between attachment to parents and interpersonal competence

H1: The hypothesis that adolescent attachment to mother and father would be positively related to interpersonal competence was supported. There were highly significant, associations between attachment to both mothers and fathers and interpersonal competence. This finding fits with the theory that the quality of attachments to parents has implications for the nature of a child's interactions and relationships with people outside the family (e.g. Bowlby, 1973; Kerns, 1996; Sroufe & Fleeson, 1986) and with empirical studies examining attachment and peer relationships in adolescence (e.g. Dekovic & Meeus, 1997; Gold & Yanof, 1985; Hauser *et al.*, 1991; Lieberman *et al.*, 1999; Rice *et al.*, 1997).

It was interesting that there was a high correlation between adolescent attachment to mother and father and that both attachment figures were highly associated with interpersonal competence. This finding supports the work of Mallickrodt (1992) who found that perception of both paternal and maternal emotional responsiveness were positively associated with social self-efficacy and perceived social support.

It is important to note, however, that in this study, attachment to parents accounted for only about 10% of the variance in interpersonal competence. Other factors such as temperament (e.g. Southam-Gerow & Kendall, 2002), physical attractiveness (e.g. Hatfield & Sprecher, 1986; Southam-Gerow & Kendall, 2002), socio-economic status (Crockenberg, 1981; Susman-Stillman *et al.*, 1996; van den Boom, 1994) and relationships with siblings (e.g. Dunn, 1988) may play a part in determining attachment status and later social competence. Emotional experiences within families are, nonetheless, amenable to intervention and therefore this is a valuable area of research for professionals working in the field of mental health.

4.7 Link between attachment to parents and coping styles

H2: The hypothesis that attachment to mother and father would be positively related to solve the problem and reference to others styles of coping and negatively related to non-productive style of coping was partially supported. There was a significant association

between attachment to parents and both solve the problem and non-productive coping over and above the demographic and clinical variables. These findings are similar to previous work reporting that adolescents with more secure attachment relationships with parents (as assessed with the Inventory of Parent and Peer Attachment), report greater use of problem-solving coping strategies relative to emotion-managing strategies when under stress (Armsden, 1987). More adaptive coping skills have also been found to be associated with more secure attachments with parents, in mid-childhood (Contreras *et al.*, 2000) and early to mid-adolescence (Armsden & Greenberg, 1987).

Unexpectedly, there was no significant association between attachment to parents and reference to others style of coping. According to attachment theory, if parents are responsive and sensitive to their child's affective signals, the child learns that distress can be regulated with strategies that involve active seeking of comfort and support from that figure (Feeney & Noller, 1996; Kobak, Cole, Ferenz-Gillies, Fleming & Gamble, 1993). It is surprising, therefore, that there was no significant association between ratings of attachment to parents in terms of trust, communication and absence of alienation and the use of reference to others style of coping.

It may be that this style of coping develops later, towards late adolescence and early adulthood, as intimacy in dyads and romantic relationships become more prominent. Indeed, as mentioned in the section on gender, there seems to be clear sex differences the use of social supports in adulthood but no consistent findings in adolescence. It would be interesting to examine an older sample of young people to test whether this style of coping emerges at around late adolescence and early adulthood.

4.8 Link between coping styles and interpersonal competence

H3: The hypothesis that solve the problem and reference to others styles of coping would be positively related to interpersonal competence, whilst non-productive coping would be negatively related, was partially supported. Solve the problem style of coping, but not reference to others or non-productive coping, was associated with interpersonal competence.

The finding that solve the problem style of coping was positively related to interpersonal competence fits with Gottman and Mettetal's (1986) proposal that emotion regulation skills

are important for managing interpersonal difficulties, especially conflict resolution, and Hubbard and Coie's (1994) finding that such skills are associated with interpersonal behaviour and peer status. Furthermore, Contreras *et al.* (2000) found that constructive coping was related to peer competence in middle childhood.

It seems surprising, however, that neither reference to others nor non-productive coping styles were related to interpersonal competence. It would make sense that people who minimised their use of non-productive coping styles would score higher on interpersonal competence. It is possible, however, that the individuals who tend to use non-productive coping strategies also have less insight into their interpersonal competence. As will be discussed in more detail in the section on limitations, future studies could benefit from including observer-rated scales in addition to self-report measures.

4.9 Coping styles as a mediating factor between attachment to parents and interpersonal competence

H4: The main hypothesis, that coping styles would explain some of the association between the perception of attachment to mothers and fathers and interpersonal competence, was supported. Attachment to mother and father did not help to explain the variance in interpersonal competence over and above solve the problem style of coping.

This finding can be understood in relation to attachment theory which proposes that patterns of emotion regulation that develop within the parent-child relationship are internalised by the child and then displayed in other interpersonal contexts (e.g. Bowlby, 1973; Cassidy, 1994; Kobak & Sceery, 1988; Lieberman, Doyle & Markiewicz, 1999). This study adds to the research literature in terms of providing evidence that attachment to parents is associated with coping styles, in particular solve the problem style of coping, and interpersonal competence in adolescence.

Previous research has tended to emphasise the importance of working models of self and other as a mediating factor between attachment and interpersonal competence. In contrast, the importance of the development of emotion regulation skills within the parent-child relationship and the impact such skills have on interpersonal competence has been somewhat neglected. This study builds on the work of Contreras *et al.* (2000) who found

evidence to suggest that problem solving skills partially mediate the association between attachment and peer relationships in middle childhood.

4.10 Limitations and directions for future research

The limitations of the present study constrain interpretations but provide directions for future research.

4.10.1 Temperamental factors

This study did not attempt to measure and control for temperamental factors. As discussed, it is likely that there is an interaction between temperamental factors and parenting experiences with temperamental characteristics of the child influencing the parent's interaction style. Although researchers often note the importance of the innate factors in socio-emotional development, it is a complicated area to research, both pragmatically and statistically, hence perhaps the lack of studies to date.

4.10.2 Bi-directional influence

It is likely that there is a bi-directional influence of parents and peers on emotion regulation and social competence. This may be particularly true in adolescence when the young person's peer group becomes more salient and is likely to have a major influence on socio-emotional development (Berndt, 1982). Indeed, Buhrmester (poster presentation, 2002) found evidence to suggest that competence and social experience recursively shape one another over time, suggesting that it is difficult to tease apart the antecedents of competence. It was not, however, within the scope of this study to assess the bi-directional influence of parents and peers.

4.10.3 Cross-sectional design

The cross-sectional design of the study does not permit definite conclusions about the directions of paths. Although I hypothesized that security to parents is an important influence on children's friendships, it is also possible that children who are socially skilled have better relationships with both parents and peers. It is likely that there is multiple directionality of effects that need to be identified via longitudinal designs.

4.10.4 Shared method variance

As mentioned in the introduction, and highlighted by Schneider and Younger (1996), it would have been ideal to have used a combination of self- and other-report measures to reduce the likelihood of shared method variance. This was not possible in this study because of time constraints. Future research should use measures of more than one type (e.g. qualitative interviews) or perspective (e.g. parent-report), in order to reduce such a problem and to provide different windows on the attachment construct.

4.11 Implications

This study may add to literature that can be drawn upon to improve prevention and intervention programmes for adolescents who struggle with their attachment relationships, behavioural coping styles and interpersonal relationships. The results highlight the importance of maternal and paternal responsiveness and sensitivity in developing their children's emotion regulation abilities and interpersonal competencies. For example, the need for caregivers to focus on children's underlying emotions, responding sensitively to their emotional signals and communicating openly about emotions. Such information could inform prevention programmes, for example parenting programmes, to promote children and young people's emotion regulation abilities and interpersonal competencies.

Furthermore, children who are considered to be at higher risk of being exposed to insensitive and inconsistent caregiving, for example fostered or adopted children, may be targeted for intervention. It may be helpful to educate adoptive or foster parents to understand the potential impact on their child of previous insensitive and inconsistent caregiving. Furthermore, advice and support could be offered to carers to help them to respond in ways that would support the revision of earlier working models of attachment and the development of socio-emotional competence.

This study also points towards the importance of providing corrective relational experiences for patients who have experienced unresponsive and insensitive relationships with attachment figures (Bowlby, 1988). Most accounts of psychotherapy from an attachment perspective advise that a cognitive-affective revision of the client's working models of attachment is necessary for the correction of earlier insecure attachment experiences. This process is presumed to entail both an awareness on the part of the patient of the effects of

past attachment experiences on current relationships, as well as the development of a more secure sense of self within the therapeutic relationship (Bowlby, 1988; Guidano, 1987; Lyddon & Alford, 1993; Mahoney, 1991; West *et al.*, 1989). Indeed Holmes (1993) proposes that the principles of the parent-infant interaction, which can lead to either secure or insecure attachment, can be applied to the relationship between psychotherapist and patient: the provision of a secure base, the emergence of a shared narrative, the processing of affect and coping with loss. Many theorists (e.g. George & Solomon, 1991; Main, Kaplan & Cassidy, 1985; Thompson, Lamb & Estes, 1982) point out that expectations about relationships may also be modified in the context of other attachment relationships (e.g. with partners) or the experience of life stress or new experiences.

4.12 Summary and conclusions

Adolescent-parent attachment relationships seem to be concurrently related to socio-emotional competence. Intervention at the developmental stage of adolescence may be particularly relevant, when young people's mental health and sense of self are so closely related to the development of intimate relationships with peers. Furthermore, because of the cognitive developments in adolescence, this period may be a particularly good time for intervention to influence the revision and consolidation of attachment-related information.

Although further research is necessary to replicate and elaborate the familial processes involved in adolescent socio-emotional competence, the results from this study suggest that both fathers and mothers play a significant role in such development among adolescents. These findings could be used to promote socio-emotional competence among adolescents through supporting parental figures to respond consistently and sensitively to their children whilst promoting their autonomy and identity development.

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Appendix 1 – Inventory of Parent and Peer Attachment (IPPA)

INVENTORY OF PARENT AND PEER ATTACHMENT (IPPA)

Authors:

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This questionnaire asks about your relationships with important people in your life; your mother, your father, and your close friends. Please read the directions to each part carefully.

Part I

Some of the following statements asks about your feelings about your mother or the person who has acted as your mother. If you have more than one person acting as your mother (e.g. a natural mother and a step-mother) answer the questions for the one you feel has most influenced you.

Please read each statement and circle the ONE number that tells how true the statement is for you now.

	Almost Never or Never True	Not Very Often True	Some-times True	Often True	Almost Always or Always True
1. My mother respects my feeling.	1	2	3	4	5
2. I feel my mother does a good job as my mother.	1	2	3	4	5
3. I wish I had a different mother.	1	2	3	4	5
4. My mother accepts me as I am.	1	2	3	4	5
5. I like to get my mother's point of view on things I'm concerned about.	1	2	3	4	5
6. I feel it's no use letting my feelings show around my mother.	1	2	3	4	5
7. My mother can tell when I'm upset about something.	1	2	3	4	5
8. Talking over my problems with my mother makes me feel ashamed or foolish.	1	2	3	4	5
9. My mother expects too much from me.	1	2	3	4	5
10. I get upset easily around my mother.	1	2	3	4	5
11. I get upset a lot more than my mother knows about.	1	2	3	4	5
12. When we discuss things, my mother cares about my point of view.	1	2	3	4	5
13. My mother trusts my judgment.	1	2	3	4	5
14. My mother has her own problems, so I don't bother her with mine.	1	2	3	4	5
15. My mother helps me to understand myself better.	1	2	3	4	5
16. I tell my mother about my problems and troubles.	1	2	3	4	5
17. I feel angry with my mother.	1	2	3	4	5
18. I don't get much attention from my mother.	1	2	3	4	5
19. My mother helps me to talk about my difficulties.	1	2	3	4	5
20. My mother understands me.	1	2	3	4	5
21. When I am angry about something, my mother tries to be understanding.	1	2	3	4	5
22. I trust my mother.	1	2	3	4	5
23. My mother doesn't understand what I'm going through these days.	1	2	3	4	5

24. I can count on my mother when I need to get something off my chest.	1	2	3	4	5
25. If my mother knows something is bothering me, she asks me about it.	1	2	3	4	5

Part II

This part asks about your feelings bout your father, or the man who has acted as your father. If you have more than one person acting as your father (e.g. natural and step-father) answer the question for the one you feel has most influenced you.

	Almost Never or Never True	Not Very Often True	Some-times True	Often True	Almost Always or Always True
1. My father respects my feelings.	1	2	3	4	5
2. I feel my father does a good job as my father.	1	2	3	4	5
3. I wish I had a different father.	1	2	3	4	5
4. My father accepts me as I am.	1	2	3	4	5
5. I like to get my father's point of view on things I'm concerned about.	1	2	3	4	5
6. I feel it's no use letting my feelings show around my father.	1	2	3	4	5
7. My father can tell when I'm upset about something.	1	2	3	4	5
8. Talking over my problems with my father makes me feel ashamed or foolish.	1	2	3	4	5
9. My father expects too much from me.	1	2	3	4	5
10. I get upset easily around my father.	1	2	3	4	5
11. I get upset a lot more than my father knows about.	1	2	3	4	5
12. When we discuss things, my father					
13. My father trusts my judgment.	1	2	3	4	5
14. My father has his own problems, so I don't bother him with mine.	1	2	3	4	5
15. My father helps me to understand myself better.	1	2	3	4	5
	Almost Never or Never True	Not Very Often True	Some-times True	Often True	Almost Always or Always True
16. I tell my father about my problems and troubles	1	2	3	4	5
17. I feel angry with my father	1	2	3	4	5
18. I don't get much attention from my father.	1	2	3	4	5
19. My father helps me to talk about my difficulties.	1	2	3	4	5
20. My father understands me.	1	2	3	4	5
21. When I am angry about something, my father tries to be understanding.	1	2	3	4	5
22. I trust my father.	1	2	3	4	5
23. My father doesn't understand what I'm going through these days.	1	2	3	4	5
24. I can count on my father when I need to get something off my chest.	1	2	3	4	5
25. If my father knows something is bothering me, he asks me about it.	1	2	3	4	5

Part III

This part asks about your feelings about your relationships with your close friends.
Please read each statement and circle the ONE number that tells how true the statement is for you now.

	Almost Never or Never True	Not Very Often True	Some-times True	Often True	Almost Always or Always True
1. I like to get my friend's point of view on things I'm concerned about.	1	2	3	4	5
2. My friends can tell when I'm upset about something.	1	2	3	4	5
3. When we discuss things, my friends care about my point of view.	1	2	3	4	5
4. Talking over my problems with friends makes me feel ashamed or foolish.	1	2	3	4	5
5. I wish I had different friends.	1	2	3	4	5
6. My friends understand me.	1	2	3	4	5
7. my friends encourage me to talk about my difficulties.	1	2	3	4	5
8. My friends accept me as I am.	1	2	3	4	5
9. I feel the need to be in touch with my friends more often.	1	2	3	4	5
10. My friends don't understand what I'm going through these days.	1	2	3	4	5
11. I feel alone or apart when I am with my friends.	1	2	3	4	5
12. My friends listen to what I have to say.	1	2	3	4	5
13. I feel my friends are good friends.	1	2	3	4	5
14. My friends are fairly easy to talk to.	1	2	3	4	5
15. When I am angry about something, my friends try to be understanding.	1	2	3	4	5
16. My friends help me to understand myself better.	1	2	3	4	5
17. My friends care about how I am feeling.	1	2	3	4	5

	Almost Never or Never True	Not Very Often True	Some-times True	Often True	Almost Always or Always True
18. I feel angry with my friends.	1	2	3	4	5
19. I can count on my friends when I need to get something off my chest.	1	2	3	4	5
20. I trust my friends.	1	2	3	4	5
21. My friends respect my feelings.	1	2	3	4	5
22. I get upset a lot more than my friends know about.	1	2	3	4	5
23. It seems as if my friends are irritated with me for no reason.	1	2	3	4	5
24. I can tell my friends about my problems and troubles.	1	2	3	4	5
25. If my friends know something is bothering me, they ask me about it.	1	2	3	4	5

Appendix 2 – Adolescent Coping Scale (ACS)

CONFIDENTIAL

Adolescent Coping Scale

SHORT FORM

1. Name: .....
2. Male: ☐ Female: ☐
3. Age: .....
4. Year Level: .....
5. School: .....
6. Today's Date: ...../...../.....
   Day Month Year

Office use only	
Sex	☐
Age	☐☐
Year	☐☐
School	☐☐

WAIT FOR INSTRUCTIONS

Students have a number of concerns or worries about things such as work, family, friends, the world and the like. Below is a list of ways in which people of your age cope with a wide variety of concerns or problems. Please indicate by circling the appropriate number, the things you do to deal with your concerns or worries. Work down the page and circle 1, 2, 3, 4 or 5 as you come to each statement. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which best describes how you feel.

For example if you **sometimes** cope with your concern by 'Talk to others to see what they would do if they had the problem' you would circle 3 as shown below:

	Doesn't apply or don't do it	**Used very little**	**Used some-times**	**Used often**	**Used a great deal**
1. Talk to others to see what they would do if they had the problem	1	2	(3)	4	5

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	Doesn't apply or don't do it	Used very little	Used some-times	Used often	Used a great deal
1. Talk to other people about my concern to help me sort it out	1	2	3	4	5
2. Work at solving the problem to the best of my ability	1	2	3	4	5
3. Work hard	1	2	3	4	5
4. Worry about what will happen to me	1	2	3	4	5
5. Spend more time with boy/girl friend	1	2	3	4	5
6. Improve my relationship with others	1	2	3	4	5
7. Wish a miracle would happen	1	2	3	4	5
8. I have no way of dealing with the situation	1	2	3	4	5
9. Find a way to let off steam; for example cry, scream, drink, take drugs etc.	1	2	3	4	5
10. Join with people who have the same concern	1	2	3	4	5
11. Shut myself off from the problem so that I can avoid it	1	2	3	4	5
12. See myself as being at fault	1	2	3	4	5
13. Don't let others know how I am feeling	1	2	3	4	5
14. Pray for help and guidance so that everything will be all right	1	2	3	4	5
15. Look on the bright side of things and think of all that is good	1	2	3	4	5
16. Ask a professional person for help	1	2	3	4	5
17. Make time for leisure activities	1	2	3	4	5
18. Keep fit and healthy	1	2	3	4	5
19. List any *other* things you do to cope with your concern/s	1	2	3	4	5

_____

_____

_____

_____

Appendix 3 – Interpersonal Competence Questionnaire – Revised (ICQ-R)

ICQ – R

Instruction:

Circle the number which best describes you. See bottom of page for what each number means.

1. How good are you at asking someone new to do things together, like go to a match or a film?	1	2	3	4	5
2. How good are you at making someone feel better when they are unhappy or sad?	1	2	3	4	5
3. How good are you at getting people to go along with what you want?	1	2	3	4	5
4. How good are you at telling people private things about yourself?	1	2	3	4	5
5. How good are you at resolving disagreements in ways that make things better instead of worse?	1	2	3	4	5
6. How good are you at going out of your way to start up new relationships?	1	2	3	4	5
7. How good are you at being able to make others feel like their problems are understood?	1	2	3	4	5
8. How good are you at taking charge?	1	2	3	4	5
9. How good are you at letting someone see your sensitive side?	1	2	3	4	5
10. How good are you at dealing with disagreements in ways that make both people happy in the long run?	1	2	3	4	5

1 = **Poor at this;** would be so uncomfortable and unable to handle this situation that it would be avoided at possible.

2 = **Fair at this;** would feel uncomfortable and would have some difficulty handling this situation.

3 = **O.K. at this;** would feel somewhat uncomfortable and have a little difficulty handling this situation.

4 = **Good at this;** would feel very comfortable and could handle this situation very well.

5 = **EXREMELY good at this;** would feel very comfortable and could handle this situation very well.

11. How good are you at carrying on conversations with new people that you would like to know better?	1	2	3	4	5
12. How good are you at helping people work through their thoughts and feelings about important decisions?	1	2	3	4	5
13. How good are you at sticking up for yourself?	1	2	3	4	5
14. How good are you at telling someone embarrassing things about yourself?	1	2	3	4	5
15. How good are you at resolving disagreements in ways so neither person feels hurt or resentful?	1	2	3	4	5
16. How good are you at introducing yourself to people for the first time?	1	2	3	4	5
17. How good are you at helping people handle pressure or upsetting events?	1	2	3	4	5
18. How good are you at getting someone to agree with your point of view?	1	2	3	4	5
19. How good are you at opening up and letting someone get to know everything about you?	1	2	3	4	5
20. How good are you at dealing with disagreements in ways so that one person does not always come out the loser?	1	2	3	4	5
21. How good are you at calling new people on the phone to set up a time to get together to do things?	1	2	3	4	5

1 = **Poor at this;** would be so uncomfortable and unable to handle this situation that it would be avoided at possible.
2 = **Fair at this;** would feel uncomfortable and would have some difficulty handling this situation.
3 = **O.K. at this;** would feel somewhat uncomfortable and have a little difficulty handling this situation.
4 = **Good at this;** would feel very comfortable and could handle this situation very well.
5 = **EXREMELY good at this;** would feel very comfortable and could handle this situation very well.

22. How good are you at showing that you really care when someone talks about problems?	1	2	3	4	5
23. How good are you at deciding what should be done?	1	2	3	4	5
24. How good are you at sharing personal thoughts and feelings with others?	1	2	3	4	5
25. How good are you at dealing with disagreements in ways that don't lead to big arguments?	1	2	3	4	5
26. How good are you at going places where there are unfamiliar people in order to get to know new people?	1	2	3	4	5
27. How good are you at helping others understand your problems better?	1	2	3	4	5
28. How good are you at voicing your desires and opinions?	1	2	3	4	5
29. How good are you at telling someone things that you do not want everyone to know?	1	2	3	4	5
30. How good are you at getting over disagreements quickly?	1	2	3	4	5
31. How good are you at making good first impressions when getting to know new people?	1	2	3	4	5
32. How good are you at giving suggestions and advice in ways that are received well by others?	1	2	3	4	5
33. How good are you at getting your own way with others?	1	2	3	4	5

1 = **Poor at this;** would be so uncomfortable and unable to handle this situation that it would be avoided at possible.
2 = **Fair at this;** would feel uncomfortable and would have some difficulty handling this situation.
3 = **O.K. at this;** would feel somewhat uncomfortable and have a little difficulty handling this situation.
4 = **Good at this;** would feel very comfortable and could handle this situation very well.
5 = **EXREMELY good at this;** would feel very comfortable and could handle this situation very well.

34. How good are you at telling someone your true feelings about other people?	1	2	3	4	5
35. How good are you at controlling your temper when having a conflict with someone?	1	2	3	4	5
36. How good are you at being an interesting and fun person to be with when first getting to know people?	1	2	3	4	5
37. How good are you at listening while others "let off steam" about problems they are going through?	1	2	3	4	5
38. How good are you at making decisions about where to go or what to do?	1	2	3	4	5
39. How good are you at telling someone what you personally think about important issues?	1	2	3	4	5
40. How good are you at backing down in a disagreement once it becomes clear that you are wrong?	1	2	3	4	5

1 = **Poor at this;** would be so uncomfortable and unable to handle this situation that it would be avoided at possible.
2 = **Fair at this;** would feel uncomfortable and would have some difficulty handling this situation.
3 = **O.K. at this;** would feel somewhat uncomfortable and have a little difficulty handling this situation.
4 = **Good at this;** would feel very comfortable and could handle this situation very well.
5 = **EXREMELY good at this;** would feel very comfortable and could handle this situation very well.

Appendix 4 – Beck Depression Inventory – FastScreen (BDI-FastScreen)

BDI® FastScreen for medical patients

Today's Date:

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

BDI–FastScreen

This questionnaire consists of groups of statements. Please read each group of statements carefully, then pick out the one statement in each group which best describes the way you have been feeling during the past 2 weeks, including today! Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle the statement which has the largest number.

1.

- **0** I do not feel sad.
- **1** I feel sad much of the time.
- **2** I am sad all the time.
- **3** I am so sad or unhappy that I can't stand it.

2.

- **0** I am not discouraged about my future.
- **1** I feel more discouraged about my future than I used to be.
- **2** I do not expect things to work out for me.
- **3** I feel my future is hopeless and will only get worse.

3.

- **0** I do not feel like a failure.
- **1** I have failed more than I should have.
- **2** As I look back, I see a lot of failures.
- **3** I feel I am a total failure as a person.

4.

- **0** I get as much pleasure as I ever did from the things I enjoy.
- **1** I don't enjoy things as much as I used to.
- **2** I get very little pleasure from the things I used to enjoy.
- **3** I can't get any pleasure from the things I used to enjoy.

5.

- **0** I feel the same about myself as ever.
- **1** I have lost confidence in myself.
- **2** I am disappointed in myself.
- **3** I dislike myself.

6.

- **0** I don't criticize or blame myself more than usual.
- **1** I am more critical of myself than I used to be.
- **2** I criticize myself for all of my faults.
- **3** I blame myself for everything bad that happens.

7.

- **0** I don't have any thoughts of killing myself.
- **1** I have thoughts of killing myself, but I would not carry them out.
- **2** I would like to kill myself.
- **3** I would kill myself if I had the chance.

_____ Total

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Appendix 5 – Beck Anxiety Inventory (BAI)

E _____ DATE _____

v is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by each tom during the PAST WEEK, INCLUDING TODAY, by placing an X in the corresponding space in the column next to each symptom.

	NOT AT ALL	MILDLY It did not bother me much.	MODERATELY It was very unpleasant, but I could stand it.	SEVERELY I could barely stand it.
1. Numbness or tingling.				
2. Feeling hot.				
3. Wobbliness in legs.				
4. Unable to relax.				
5. Fear of the worst happening.				
6. Dizzy or lightheaded.				
7. Heart pounding or racing.				
8. Unsteady.				
9. Terrified.				
10. Nervous.				
11. Feelings of choking.				
12. Hands trembling.				
13. Shaky.				
14. Fear of losing control.				
15. Difficulty breathing.				
16. Fear of dying.				
17. Scared.				
18. Indigestion or discomfort in abdomen.				
19. Faint.				
20. Face flushed.				
21. Sweating (not due to heat).				

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NHS
Lothian

DEMOGRAPHIC QUESTIONNAIRE

First some questions about you:

1. **Age.....years old**

2. **Sex** *Circle here*
   Male.....1
   Female.....2

3. **Year in Secondary School .....year**

4. **Parental marital status: (please circle)**

Married/single parent/divorced/separated/engaged?

Appendix 7 – Information sheet for young person – non-clinical

6th January 2004

NHS
Lothian

From: Charlotte Brodie
Trainee Clinical Psychologist
Young People's Unit
Tipperlinn Road
Edinburgh
EH10 5HF
Tel 0131 537 6364

Title of Project: The influence of early relationships on ways of coping with feelings and the effect of such ways of coping on social skills.

Name of researcher: Charlotte Brodie, Trainee Clinical Psychologist
Name of supervisor: Cathy Richards, Consultant Clinical Psychologist

A lot of work has been done to look at how early relationship experiences influence how later relationships develop. Recently researchers have been looking at *how* early relationships influence a person's style of getting on with other people. Some researchers have suggested that early relationships e.g. with our parents, may have an effect on the way we learn to cope with emotions. These ways of coping then may play a part in how we get along with people later on in our lives.

Research exploring young people's early relationships, coping styles and friendships is at an early stage of development. The benefits of such research may include the advancement of preventative programmes to help young people recognise the coping strategies they use and how to develop additional strategies. Such education into ways of coping may directly help young people to deal with life stressors but also to develop closer relationships with others. The overall aim is to develop ways to help protect young people against the development of mental health problems.

Aims of the research are to:

- Examine the different ways young people cope
- Examine the different experiences of being looked after (e.g. from your mother or father) and how that is linked to the development of coping strategies.
- Examine the link between coping styles and social skills.

If you agree to take part in this study, by **signing the attached consent form**, I will ask you to **complete several questionnaires that will take about 40 minutes to complete**. You will not be asked to give your name or any means of identifying you. Your responses will therefore be anonymous. In addition, your responses on the questionnaires will be confidential. Your questionnaires will be stored in a secure place.

You are completely free not to participate in this study and you are free to withdraw from the study at anytime, without any explanation.

If you have any questions about the research, please contact Arthur Still (independent advisor) at: University of Edinburgh, Kennedy Tower, Royal Edinburgh Hospital, Morningside Terrace, Edinburgh. EH10 5HF. Tel. 0131 537 6000.

Appendix 8 – Information sheet for parents – non-clinical

23rd March 2004

NHS Lothian

From: Charlotte Brodie
Trainee Clinical Psychologist
Young People's Unit
Tipperlinn Road
Edinburgh
EH10 5HF

Tel. 0131 537 6364

Title of Research Project: The influence of early relationships on ways of coping with feelings and the effect of such ways of coping on peer relationships.

Name of researcher: Charlotte Brodie, Trainee Clinical Psychologist, Young People's Unit

Name of field supervisor: Cathy Richards, Consultant Clinical Psychologist, Young People's Unit

Dear Parent

I am writing to inform you that I have approached you son/daughter to ask if he or she would be interested in participating in my research project. This research will represent a substantial component of the Doctorate in Clinical Psychology, which I am currently undertaking at Edinburgh University. The following is a brief summary of the **background to the research** and **what your son or daughter would be asked to do** if he or she were willing to participate.

Background

A great deal of research has been conducted examining how attachment to primary caregivers influences how later relationships develop. Many researchers have looked at how "working models" of early relational experiences influence the perception of and reaction to later relationships. Recently researchers have tried to examine other mechanisms by which early and later relationships are linked. Specifically, emotion regulation, or coping style, is thought to be another medium that links early and later relationships. In other words, children learn how to regulate their emotions partly through how other people, particularly their primary caregiver, respond to them. Children may develop particular coping styles that are adaptive at this time, based on the responsiveness of their caregiver. Such coping styles may persist into adolescence, at a time when the development of relationships out with the family are crucial to the process of developing as a young adult.

Research exploring young people's early relationships, coping styles and friendships (in adolescence) is at an early stage of development. The benefits of such research may include the development of preventative programmes to help young people recognise the coping strategies they use and how to develop additional strategies. Such education into ways of coping may help young people to deal with life stressors and to develop closer relationships. The overall aim is to develop ways to help protect young people against the development of mental health problems.

Aims of the research

- Examine the different ways young people cope.
- Examine the different experiences of care giving and how that is linked to the development of particular coping strategies.
- Examine the link between coping styles and social skills.
- To compare a non-clinical population (secondary school pupils) to young people attending the Young People's Unit (Day and Out patients).

Permission to carry out the research

I have received permission both from the Lothian Ethics Research Committee and the Education Department of The City of Edinburgh Council, to proceed with this research. For your information, I have attached the permission letter from the Education Department.

What your son or daughter would be asked to do:

If your son or daughter were willing to participate in this study, after he or she has read the information sheet, I would ask him or her to **sign a consent form and then complete some questionnaires**. The questionnaires will take about 40 minutes to complete. The young person will not be asked to give their name or any other identifier. His or her responses will therefore be anonymous. In addition, his or her responses on the questionnaires will be confidential and will be securely stored.

Your son or daughter is completely free to refuse to participate in this study and he or she is free to withdraw from the study at anytime, without any explanation. If your son or daughter refuses to participate, his or her care (if applicable) will not be affected.

If you have any questions about the research, please contact Arthur Still (independent advisor) at: University of Edinburgh, Kennedy Tower, Royal Edinburgh Hospital, Morningside Terrace, Edinburgh. EH10 5HF. Tel: 0131 537 6000 or Charlotte Brodie (principal researcher) at the above address.

Thank you very much for taking the time to read this and to consider if you are willing to allow your son or daughter to participate.

If you are not willing for your son or daughter to participate, please complete the slip below and return it to the school office by Wednesday 31st March 2004.

.....

OPT OUT SLIP

(Please complete if you do not want your son or daughter to participate in the study).

I do not want my son or daughter to participate in the research project titled:

The influence of early relationships on ways of coping with feelings and the effect of such ways of coping on peer relationships.

Name of Child(ren) (please specify which year he or she is in):

Name:.....

Name:.....

Name:.....

Appendix 9 – Consent form – non-clinical

NHS
Lothian

From: Charlotte Brodie
Trainee Clinical Psychologist
Young People's Unit
Tipperlinn Road
Edinburgh
EH10 5HF

Tel. 0131 537 6364

CONSENT FORM

Title of Project: The influence of early relationships on ways of coping with feelings and the effect of such ways of coping on social skills.

Name of Researcher: Charlotte Brodie, Trainee Clinical Psychologist

	Please initial
I confirm that I have read and understand the information sheet dated 24/11/2003 for the above study and have had the opportunity to ask questions.	_____
I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.	_____
I agree to take part in the above study.	_____

_____	_____	_____
Name of Pupil (please print)	Date	Signature
_____	_____	_____
Name of Guidance Teacher/Guardian	Date	Signature

Appendix 10 – Information sheet for young person – clinical

3rd May 2004

NHS Lothian

From: Charlotte Brodie
Trainee Clinical Psychologist
Young People's Unit
Tipperlinn Road
Edinburgh
EH10 5HF Tel 0131 537 6364

Title of Project: The influence of early relationships on ways of coping with feelings and the effect of such ways of coping on social skills.

Name of researcher: Charlotte Brodie, Trainee Clinical Psychologist
Name of supervisor: Cathy Richards, Consultant Clinical Psychologist

A lot of work has been done to look at how early relationship experiences influence how later relationships develop. Recently researchers have been looking at *how* early relationships influence a person's style of getting on with other people. Some researchers have suggested that early relationships e.g. with our parents, may have an effect on the way we learn to cope with emotions. These ways of coping then may play a part in how we get along with people later on in our lives.

Research exploring young people's early relationships, coping styles and friendships is at an early stage of development. The benefits of such research may include the advancement of preventative programmes to help young people recognise the coping strategies they use and how to develop additional strategies. Such education into ways of coping may directly help young people to deal with life stressors but also to develop closer relationships with others. The overall aim is to develop ways to help protect young people against the development of mental health problems.

Aims of the research are to:

- Examine the different ways young people cope
- Examine the different experiences of being looked after (e.g. from your mother or father) and how that is linked to the development of coping strategies.
- Examine the link between coping styles and social skills.

If you agree to take part in this study, by **signing the attached consent form**, I will ask you to **complete several questionnaires that will take about 40 minutes to complete**. You will not be asked to give your name or any means of identifying you. Your responses will therefore be anonymous. In addition, your responses on the questionnaires will be confidential. Your questionnaires will be stored in a secure place.

You are completely free not to participate in this study and you are free to withdraw from the study at anytime, without any explanation. If you refuse to participate, your care/treatment will not be affected.
If you have any questions about the research, please contact Arthur Still (independent advisor) at: University of Edinburgh, Kennedy Tower, Royal Edinburgh Hospital, Morningside Terrace, Edinburgh. EH10 5HF. Tel. 0131 537 6000.

Appendix 11 – Information sheet for parents – clinical

29th January 2004

NHS
Lothian

From: Charlotte Brodie
Trainee Clinical Psychologist
Young People's Unit
Tipperlinn Road
Edinburgh
EH10 5HF Tel. 0131 537 6364

Title of Project: The influence of early relationships on ways of coping with feelings and the effect of such ways of coping on social skills.

Name of researcher: Charlotte Brodie, Trainee Clinical Psychologist

Name of field supervisor: Cathy Richards, Consultant Clinical Psychologist

Dear Parent

I am writing to inform you that I have approached you son or daughter to ask if he or she would be interested in participating in my research project. This research will represent a substantial component of the Doctorate in Clinical Psychology, which I am currently undertaking at Edinburgh University. The following is a brief summary of the background to the research and what your son or daughter would be asked to do if he or she were willing to participate.

Background

A great deal of research has been conducted examining how childrens' relationship with their parents influences how later relationships develop. Many researchers have looked at how early relational experiences influence the perception of and reaction to later relationships. Recently researchers have tried to examine other ways by which early and later relationships are linked. Specifically, coping styles, are thought to be another medium which links early and later relationships. In other words, children learn how to control their emotions partly through how other people, particularly their parents, respond to them. Such coping styles may continue into adolescence, at a time when the development of relationships out with the family are crucial to the process of developing as a young adult.

Research exploring young people's early relationships, coping styles and friendships (in adolescence) is at an early stage of development. The benefits of such research may include the development of preventative programmes to help young people recognise the coping strategies they use and how to develop additional strategies. Such education into ways of coping may help young people to deal with life stressors and to develop closer relationships. The overall aim is to develop ways to help protect young people against the development of mental health problems.

Aims of the research

- Examine the different ways young people cope.
- Examine the different experiences of care giving and how that is linked to the development of particular coping strategies.
- Examine the link between coping styles and social skills.
- To compare a non-clinical population (secondary school pupils) to young people attending the Young People's Unit (Day and Out patients).

If your son or daughter is interested in participating in this study, after he or she has read the information sheet, I would need both him or her *and* you to sign the attached consent form. I would then ask him or her to complete several questionnaires that will take about 40 minutes to complete. The young person will not be asked to give their name or any other identifier. His or her responses will therefore be anonymous. In addition, his or her responses on the questionnaires will be confidential and will be securely stored.

Your son or daugher is completely free to refuse to participate in this study and he or she is free to withdraw from the study at anytime, without any explanation. If your son or daugher refuses to participate, his or her care (if applicable) will not be affected.

If you have any questions about the research, please contact Arthur Still (independent advisor) at: University of Edinburgh, Kennedy Tower, Royal Edinburgh Hospital, Morningside Terrace, Edinburgh. EH10 5HF. Tel: 0131 537 6000 or Charlotte Brodie (principal researcher) at the above address.

Thank you very much for taking the time to read this and to consider if you are willing to allow your son or daughter to participate.

Appendix 12 – Consent form – clinical

From: Charlotte Brodie
Trainee Clinical Psychologist
Young People's Unit
Tipperlinn Road
Edinburgh
EH10 5HF

Tel. 0131 537 6364

CONSENT FORM

Title of Project: The influence of early relationships on ways of coping with feelings and the effect of such ways of coping on social skills.

Name of Researcher: Charlotte Brodie, Trainee Clinical Psychologist

Please initial

I confirm that I have read and understand the information sheet dated 24/11/2003 for the above study and have had the opportunity to ask questions. _____

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected. _____

I understand that any information, disclosed during the course of the research, will remain confidential unless deemed important for my continuing care in which case it will be shared with my therapist. _____

I agree for notice to be sent to my General Practitioner about my participation in this study. _____

I agree to take part in the above study. _____

_____	_____	_____
Name of Patient	Date	Signature
_____	_____	_____
Name of Person taking consent/Guardian	Date	Signature

Appendix 13 – Skewness, kurtosis and transformations for the main variables

Inventory of Parent and Peer Attachment

Non-clinical sample

The IPPA score for attachment to mother showed moderate negative skewness (skewness=-1.034, SE=.18) and kurtosis (kurtosis=1.02, SE=.36). The Kolmogorov-Smirnov test revealed a significant deviation from normality ($z=1.58$, $df=179$, $p<0.05$). This indicated that these data required transformation before parametric statistics were conducted. This variable was reflected and then a square root transformation was carried out. Attachment to mother was no longer skewed (skewness=.1, SE=.18; kurtosis=.09, SE=.36). The transformed variable was used for the rest of the analyses.

The IPPA score for attachment to father showed moderate negative skewness (skewness=-.81, SE=.18) but no kurtosis (kurtosis=.29, SE=.37). Similarly, the IPPA score for attachment to friends was slightly negatively skewed (skewness=-.44, SE=.18) but demonstrated no kurtosis (kurtosis=-.41, SE=.36). The Kolmogorov-Smirnov test indicated that neither of these subscales significantly deviated from normality (attachment to father $z=1.3$, $df=168$, N.S.; attachment to friends $z=1.13$, $df=181$, N.S.).

Clinical sample

All subscales of the IPPA were normally distributed. The IPPA score for attachment to mother showed a normal distribution with low levels of skewness (skewness=.34, SE=.59) and kurtosis (kurtosis=-1.22, SE=1.15). The IPPA score for attachment to father showed a normal distribution with low levels of skewness (skewness=.31, SE=.59) and kurtosis (kurtosis=-1.33, SE=1.15). The IPPA score for attachment to friend showed a normal distribution with low levels of skewness (skewness=-.81, SE=.6) and kurtosis (kurtosis=-.17, SE=1.15).

Adolescent Coping Scale

Non-clinical sample

All of the subscales showed a normal distribution with low levels of skewness and kurtosis (solve the problem style of coping skewness=-.34, SE=.18 and kurtosis=.42, SE=.36; reference to others skewness=.17, SE=.18 and kurtosis=-.46, SE=.36; and non-productive coping skewness=.15, SE= .18 and kurtosis=-.37, SE=.36).

Clinical sample

All of the subscales showed a normal distribution with low levels of skewness and kurtosis (solve the problem style of coping skewness=.34, SE=.6 and kurtosis=-.96, SE=1.15; reference to others skewness=-.36, SE=.6 and kurtosis=-1.26, SE=1.15; and non-productive coping skewness=-1.1, SE= .6 and kurtosis=.67, SE=1.15).

Interpersonal Competence Questionnaire-Revised

Non-clinical sample

The total scores for the ICQ-R showed a normal distribution with low levels of skewness (skewness=-.34, SE=.18) and kurtosis (kurtosis=.29, SE=.36).

Clinical sample

The total scores for the ICQ-R showed a normal distribution with low levels of skewness (skewness=-.16, SE=.6) and kurtosis (kurtosis=-1.14, SE=1.15).

BDI-FastScreen

Non-clinical sample

The BDI-FastScreen showed low levels of skewness (skewness=-.18, SE=.2) but some kurtosis (kurtosis=-1.02, SE=.4). The Kolmogorov-Smirnov test revealed a significant deviation from normality ($z=1.97$, $df=171$, $p<0.01$). This indicated that these data required transformation before parametric statistics were conducted. A logarithmic transformation was more effective than a square root transformation in reducing the kurtosis[1] (skewness=-.18, SE=.19 and kurtosis=-1.03, SE=.37). The transformed BDI-FastScreen scores were used in the rest of the analyses.

Clinical sample

The BDI-FastScreen showed a normal distribution with low levels of skewness (skewness=-.44, SE=.6) and kurtosis (kurtosis=-1.09, SE=1.15).

BAI

Non-clinical sample

The BAI showed moderate positive skewness (skewness=-.62, SE=.2) but low levels of kurtosis (kurtosis=-.21, SE=.4). The Kolmogorov-Smirnov test revealed a significant deviation from normality ($z=1.99$, $df=169$, $p<0.01$). This indicated that these data required transformation before parametric statistics were conducted. A square root transformation reduced the skewness (skewness=.09; SE=.19 and kurtosis=-.08; SE=.37). The transformed variable was used for the rest of the analyses.

Clinical sample

The BAI showed a normal distribution with low levels of skewness (skewness=-.19, SE=.6) and kurtosis (kurtosis=-1.28, SE=1.15).

---

[1] Because the smallest value on the BDI-FastScreen variable was zero, one was added to each score as the transformation was performed.